Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 13.02.95 Edition Test oil : ISO 4113

Combination No. : 0403246041

Injection pump

Pump designation : PES6MW100/720RS1522

EP type number : 0413206023

Governor

Governer design. : RQV300...1300MW148

: -2

Governer no. : 0420083323

Cust. part No. : 0250748902

Customer-spec. information Customer : MB-NFZ Motor : 0M366LA Power KW : 177.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 1419992198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1688901101

Opening pressure

208.5 Tolerance bar : +- 1.5

Test Lines : 1680750089

Outside diameter : 8.0

x inside diameter: 3.0 : 600 x length mm

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 4.55 : **←** 0.05 Tolerance mm

test only : + 0.10

Rack travel in mm: 21.00

: 1-5-3-6-2-Firing order

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance °NW : ← 0.75

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm: 14.40 : +- 0.05 Tolerance mm

Del. quantity cm3/1000 strokes : 133.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : +- 4.0

Spreed

Tolerance	+ guide sleeve
cm3/1000 strokes : 5.0	+ travel mm : 13.50
	+ Tolerance mm : +- 0.50
Check tolerance	+
cm3/1000s. : 8.0	-
	+ GUIDE SLEEVE POSITION
2nd speed rpm : 300	}
, ,	+ Rated speed rpm : 1500
Rack travel in mm: 4,40	4
Tolerance mm : + 0.10	+ Rack travel in mm : 10.00
Del. quantity	+ Tolerance mm : + 2.50
cm3/1000 strokes : 12.0	1
Tolerance	
cm3/1000 strokes : $+$ 2.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance	1
cm3/1000s. : +- 4.5	+ Rated speed rpm : 1300
Spreed	+ Aneroid pressure
Tolerance	hPa : 1200
cm3/1000 strokes : 2.0	Del. quantity
Check tolerance	- cm3/1000 strokes : 133.0
cm3/1000s. : 4.0	Tolerance
	cm3/1000 strokes : +- 1.0
	+ Check tolerance
(B) SETTING OF INJECTION PUMP	+ cm3/1000s. : + 4.0
WITH GOVERNOR	Spreed
WITH GOVERNOR	+ Tolerance
	- cm3/1000 strokes : 5.0
GUIDE SLEEVE TRAVEL	Check tolerance
GOIDE SEELE HAVEE	- cm3/1000s. : 8.0
Rated speed rpm : 300	T (1113/10003 0.0
guide sleeve	
travel mm : 0.92	RATED SPEED
Tolerance mm : + 0.25	T RATED SPEED
Toterance inti	
Rated speed rpm : 1355	control lever
Rated speed rpm : 1355 - guide sleeve -	
travel mm : 9.33	
	tolerance degree : +- 4.0
Tolerance mm : +- 0.25	T
Dated aread non- a 1079	rack travel mm : 13.40
Rated speed rpm : 1078	Rated speed rpm : 1345
guide sleeve -	Tolerance 1/min : +- 5
travel mm : 7.06	T
Tolerance mm : + 0.25	rack travel mm : 4.00
Data diamandiaman in EAV	Rated speed rpm : 1495
Rated speed rpm : 514	Tolerance 1/min : + 15
guide sleeve	7
travel mm : 2.14	rack travel mm : 0.50
Tolerance mm : + 0.25	Tolerance mm : + 0.50
Dated aread was 5//	Rated speed rpm : 1600
Rated speed rpm : 564	<u> </u>
guide steeve	101 7015
travel mm : 2.47	LOW IDLE
Tolerance mm : + 0.25	<u>†</u>
	t
Rated speed rpm : 750	- control lever
guide sleeve	position degree : 74.0
travel mm : 4.02	- tolerance degree : +- 4.0
Tolerance mm : +- 0.25	
	- Testing:
Rated speed rpm : 1720 -	+

Rated speed rpm rack travel mm Tolerance mm Rated speed rpm CRT mm min. TORQUE CONTROL	: 4.40 : ← 0.10 : 200	Aneroid pressure hPa : 1200 Rated speed rpm : 750 Del. quantity cm3/1000 strokes : 132.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 5.0
Rated speed rpm rack travel mm Tolerance mm	: 14.40 : +- 0.05	Spreed Tolerance cm3/1000 strokes: 6.0 Check tolerance cm3/1000S. : 9.0
Rated speed rpm rack travel mm Tolerance mm	: ← 0.10 	Aneroid pressure hPa : 1200 Rated speed rpm : 1300 Del. quantity cm3/1000 strokes : 105.0
ANEROID/ALTITUDE COMPENSATOR TEST SETTING		Tolerance - cm3/1000 strokes : +- 1.5 - Check tolerance - cm3/1000s. : +- 3.0
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 1200 : 14.40	Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 46.0 Tolerance
MEASUREMENT Pressure hPa Rated speed rpm Tolerance mm		cm3/1000 strokes : + 1.0 + Check tolerance + cm3/1000s. : + 3.0
Rated speed rpm		BREAKAWAY
Pressure hPa rack travel mm Tolerance mm Pressure hPa	: 5.30 : + 0.10 : 450	Rack travel in mm: 13.40 Rated speed rpm: 1345 Tolerance 1/min: + 5
rack travel mm Tolerance mm	: 3.00 : + 0.10	STARTING FUEL DELIVERY
START CUT-OUT Rated speed rpm Check speed 1/min Rated speed rpm	: > 80	Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 160.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0
Check speed 1/min	: < 220	‡
FUEL DELIVERY CHA	RACTERISTICS	LOW IDLE

300
4.40
0.10
12.0
2.0
4.5
2.0
4.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 23.03.95 Edition Test oil : ISO 4113

Combination No. : 0403276005

Injection pump

Pump designation : PES6MW100/720RS1517

: -3

EP type number : 0413206020

Governor

Governer design. : RSV350...1200MW0A355

Governer no. : 0420085228

Cust. part No. : 0250740102

Customer-spec. information Customer : MB-NFZ : 0M366LA Motor Power KW : 100.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C 40 Tolerance °C

Overflow valve : 1419992198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1688901101

Opening pressure

208.5 Tolerance bar : + 1.5

Test lines : 1680750089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

Set pneumatic shutoff device to control-rod stop = 0.5...1.5 mm control-rod travel at 4.5 bar atmospheric pressuré.

Test hydr. locking device for starting with 800...1200 hPa air pressure.

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 4.55 : +- 0.05 Tolerance mm

test only $: \leftarrow 0.10$

Rack travel in mm: 21.00

: 1-5-3-6-2-Firing order

Phasing : 0-60-120-180-240

: -300

Tolerance : + - 0.50

Check

tolerance *NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1200

Rack travel in mm: 11.15 Tolerance mm : + 0.05

Del. quantity +	Tolerance
cm3/1000 strokes : 100.0 +	cm3/1000 strokes : $+-$ 1.0
	Check tolerance
Tolerance +	cm3/1000s. : $+3.0$
cm3/1000 strokes : + 1.0 +	Spreed
+	Tolerance
Check tolerance	cm3/1000 strokes : 3.5
cm3/1000s. : + 3.0	Check tolerance
1	cm3/1000s. : 6.0
Spreed	
Tolerance	
cm3/1000 strokes : 3.5	RATED SPEED
	NATED OF LED
Check tolerance	
cm3/1000s. : 6.0	control lever
CIID/10003 0.0	
2nd speed rpm : 350	position degree : 96.0
2nd speed rpm : 350 +	tolerance degree : +- 4.0
Pook travel in ma . 7.00	nook drovel am - 4.00
Rack travel in mm: 3.00 + Tolerance mm: + 0.30 +	rack travel mm : 1.00
	Tolerance mm : + 0.70
Del. quantity	Rated speed rpm : 1400
cm3/1000 strokes : 12.0 +	
Tolerance +	rack travel mm : 4.00
cm3/1000 strokes : + 2.0 +	Rated speed rpm : 1315
Check tolerance +	
cm3/1000s. : + 4.5 +	rack travel mm : 10.15
Spreed +	Rated speed rpm : 1,5
Tolerance +	Tolerance 1/min : + 5
cm3/1000 strokes : 3.5	
Check tolerance	
$cm3/1000s$. : 5.5 \pm	LOW IDLE
	244 +5
+	W 777
‡	
(B) SETTING OF INJECTION PUMP	control lever
‡	control lever
(B) SETTING OF INJECTION PUMP	control lever position degree : 66.0
(B) SETTING OF INJECTION PUMP	control lever
(B) SETTING OF INJECTION PUMP	control lever position degree : 66.0 tolerance degree : +- 4.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	control lever position degree : 66.0
(B) SETTING OF INJECTION PUMP	<pre>control lever position degree : 66.0 tolerance degree : +- 4.0 Testing:</pre>
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	control lever position degree : 66.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 350
(B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION	control lever position degree : 66.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 350 rack travel mm : 3.00
(B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION control lever	<pre>control lever position degree : 66.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 350</pre>
(B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION control lever position degree : - 3	control lever position degree : 66.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 350 rack travel mm : 3.00 Tolerance mm : + 0.10
(B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION control lever	control lever position degree : 66.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 350 rack travel mm : 3.00 Tolerance mm : + 0.10 rack travel mm : 2.00
(B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800	control lever position degree : 66.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 350 rack travel mm : 3.00 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 390
(B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50	control lever position degree : 66.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 350 rack travel mm : 3.00 Tolerance mm : + 0.10 rack travel mm : 2.00
(B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800	control lever position degree : 66.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 350 rack travel mm : 3.00 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 390 Tolerance 1/min : + 30
(B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20	control lever position degree : 66.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 350 rack travel mm : 3.00 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 390
(B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring	control lever position degree : 66.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 350 rack travel mm : 3.00 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 390 Tolerance 1/min : + 30 Rated speed rpm : 100
(B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension	control lever position degree : 66.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 350 rack travel mm : 3.00 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 390 Tolerance 1/min : + 30
(B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring	control lever position degree : 66.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 350 rack travel mm : 3.00 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 390 Tolerance 1/min : + 30 Rated speed rpm : 100
(B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension	control lever position degree : 66.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 350 rack travel mm : 3.00 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 390 Tolerance 1/min : + 30 Rated speed rpm : 100 CRT mm min. : > 19.00
(B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.50	control lever position degree : 66.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 350 rack travel mm : 3.00 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 390 Tolerance 1/min : + 30 Rated speed rpm : 100
(B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension	control lever position degree : 66.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 350 rack travel mm : 3.00 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 390 Tolerance 1/min : + 30 Rated speed rpm : 100 CRT mm min. : > 19.00
(B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.50 FULL LOAD DELIVERY AT FULL LOAD STOP	control lever position degree : 66.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 350 rack travel mm : 3.00 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 390 Tolerance 1/min : + 30 Rated speed rpm : 100 CRT mm min. : > 19.00 TORQUE CONTROL Rated speed rpm : 1200
(B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1200	control lever position degree : 66.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 350 rack travel mm : 3.00 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 390 Tolerance 1/min : + 30 Rated speed rpm : 100 CRT mm min. : > 19.00 TORQUE CONTROL Rated speed rpm : 1200 rack travel mm : 11.15
(B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1200 Aneroid pressure	control lever position degree : 66.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 350 rack travel mm : 3.00 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 390 Tolerance 1/min : + 30 Rated speed rpm : 100 CRT mm min. : > 19.00 TORQUE CONTROL Rated speed rpm : 1200
(B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1200 Aneroid pressure hPa : 1000	control lever position degree : 66.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 350 rack travel mm : 3.00 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 390 Tolerance 1/min : + 30 Rated speed rpm : 100 CRT mm min. : > 19.00 TORQUE CONTROL Rated speed rpm : 1200 rack travel mm : 11.15 Tolerance mm : + 0.05
(B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1200 Aneroid pressure hPa : 1000 Del. quantity	control lever position degree : 66.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 350 rack travel mm : 3.00 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 390 Tolerance 1/min : + 30 Rated speed rpm : 100 CRT mm min. : > 19.00 TORQUE CONTROL Rated speed rpm : 1200 rack travel mm : 11.15 Tolerance mm : + 0.05 Rated speed rpm : 750
(B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1200 Aneroid pressure hPa : 1000	control lever position degree : 66.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 350 rack travel mm : 3.00 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 390 Tolerance 1/min : + 30 Rated speed rpm : 100 CRT mm min. : > 19.00 TORQUE CONTROL Rated speed rpm : 1200 rack travel mm : 11.15 Tolerance mm : + 0.05

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1000
rack travel mm : 11.15
Tolerance mm : + 0.10

MEASUREMENT

Pressure hPa : Rated speed rpm : 500
rack travel mm : 10.20
Tolerance mm : + 0.10

Rated speed rpm : 500

Pressure hPa : 380 rack travel mm : 10.90 Tolerance mm : + 0.10

Pressure hPa : 300 rack travel mm : 10.50 Tolerance mm : + 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : 1000
Rated speed rpm : 750
Del. quantity
cm3/1000 strokes : 94.0
Tolerance
cm3/1000 strokes : + 1.5
Check tolerance
cm3/1000s. : + 4.0
Spreed

cm3/1000 strokes : 5.5 Check tolerance

cm3/1000s. : 7.0

Aneroid pressure

Tolerance

hPa : Rated speed rpm : 500
Del. quantity

cm3/1000 strokes : 73.0 Tolerance

cm3/1000 strokes : +- 1.0
Check tolerance
cm3/1000s. : +- 3.0

STARTING FUEL DELIVERY

Rated speed rpm : 100 Del. quantity

cm3/1000 strokes : 120.0

Tolerance

cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0

LOW IDLE

Rated speed rpm 350 rack travel mm 3.00 Tolerance mm 0.30 Del. quantity cm3/1000 strokes : 12.0 Tolerance cm3/1000 strokes 2.0 Check tolerance cm3/1000s. 4.5 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. 5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 23.03.95 Test oil : ISO 4113

Combination No. : 0403276006

Injection pump

Pump designation : PES6MW100/720RS1517

: -3

EP type number : 0413206020

Governor

Governer design. : RSV350...1200MW0A355

: -1

Governer no. : 0420085229

Cust. part No. : 0250740202

Customer—spec. information Customer : MB-NFZ Motor : OM366LA Power KW : 120.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40 Tolerance °C : +- 2.0

Overflow valve : 1419992198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1688901101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1680750089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

Set pneumatic shutoff device to control-rod stop = 0.5...1.5 mm control-rod travel at 4.5 bar atmospheric pressure.

Test hydr. locking device for starting with 800...1200 hPa air pressure.

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 4.55 Tolerance mm : +- 0.05

test only $: \leftarrow 0.10$

Rack travel in mm: 21.00

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance *NW : + 0.75

BASIC SETTING

Rated speed rpm : 1200

Rack travel in mm: 11.45

Tolerance mm : +- 0.05

Del. quantity +	Tolerance
cm3/1000 strokes : 103.0	cm3/1000 strokes : +- 1.0
T 1000 Strokes . 105.0	Check tolerance
Tolerance	
	cm3/1000s. : +- 3.0
cm3/1000 strokes : +- 1.0	Spreed
	Tolerance
Check tolerance	cm3/1000 strokes : 3.5
cm3/1000s. : +- 3.0 +	Check tolerance
	cm3/1000s. : 6.0
Spreed	
Tolerance +	
cm3/1000 strokes : 3.5	RATED SPEED
+	
Check tolerance	
cm3/1000s. : 6.0	control lever
1	position degree : 98.0
2nd speed rpm : 350	tolerance degree : + 4.0
	to contained degree
Rack travel in mm: 3.10	rack travel mm : 1.00
Tolerance mm : + 0.30	Tolerance mm : +- 0.70
Del. quantity	
cm3/1000 strokes : 12.0	Rated speed rpm : 1400
Tolerance	rack travel mm : 4.00
cm3/1000 strokes : + 2.0	Rated speed rpm : 1320
Check tolerance	40.40
cm3/1000s. : + 4.5 +	rack travel mm : 10.40
Spreed +	Rated speed rpm : 1.5
Tolerance +	Tolerance 1/min : + 5
cm3/1000 strokes : 3.5	
Check tolerance +	
cm3/1000s. : 5.5	LOW IDLE
+	·
4	
(B) SETTING OF INJECTION PUMP	control lever
WITH GOVERNOR	position degree : 68.0
	tolerance degree : + 4.0
\mathbf{I}	toter differ degree 4.0
	Testing:
GUIDE SLEEVE POSITION	resting.
GOIDE SEELVE POSTITON	Pated speed ppm . 350
†	Rated speed rpm : 350
†	rack travel mm : 3.10
control lever	Tolerance mm : +- 0.10
position degree : -3	
Rated speed rpm : 800 +	rack travel mm : 2.00
†	Rated speed rpm : 390
Rack travel in mm: 0.50	Tolerance 1/min : +- 30
Tolerance mm : + 0.20 +	
+	Rated speed rpm ; 100
governor spring +	
pre-tension +	CRT mm min. :> 19.00
click setting x : 4.50	
+	
	TORQUE CONTROL
FULL LOAD DELIVERY AT FULL LOAD STOP	
1	Rated speed rpm : 1200
Rated speed rpm : 1200	rack travel mm : 11.45
Aneroid pressure	Tolerance mm : + 0.05
hPa : 1000 +	
Del. quantity	Rated speed rpm : 750
cm3/1000 strokes : 103.0	rack travel mm : 11.45
1	· were the file of the terms

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm 500 Pressure hPa 1000 rack travel mm 11.45 Tolerance mm : + 0.10

MEASUREMENT

Pressure hPa 500 Rated speed rpm 9.85 rack travel mm Tolerance mm 0.10

500 Rated speed rpm

530 Pressure hPa 11.00 rack travel mm : ← 0.10 Tolerance mm

Pressure hPa 350 rack travel mm 10.00 Tolerance mm : + 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

1000 hPa Rated speed rpm 750 Del. quantity 97.0 cm3/1000 strokes : Tolerance cm3/1000 strokes 1.5 Check tolerance cm3/1000s. 4.0 Spreed Tolerance cm3/1000 strokes : 5.5 Check tolerance

Aneroid pressure

cm3/1000s.

hPa Rated speed rpm 500 Del. quantity cm3/1000 strokes : 64.0 Tolerance cm3/1000 strokes 1.0 Check tolerance cm3/1000s. : +--3.0

7.0

STARTING FUEL DELIVERY

Rated speed rpm 100 Del. quantity cm3/1000 strokes : 140.0 Tolerance

cm3/1000 strokes : +-5.0

Check tolerance 8.0 cm3/1000s. : +-

LOW IDLE

Rated speed rpm 350 3.10 rack travel mm 0.30 Tolerance mm Del. quantity cm3/1000 strokes : 12.0 Tolerance cm3/1000 strokes 2.0 Check tolerance cm3/1000s. 4.5 Spreed Tolerance 3.5 cm3/1000 strokes : Check tolerance cm3/1000s. 5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 24.03.95 Test oil : ISO 4113

Combination No. : 0403276007

Injection pump

Pump designation : PES6MW100/720RS1517

: -3

EP type number : 0413206020

Governor

Governer design. : RSV350...1200MW0A355

: -2

Governer no. : 0420085230

Cust. part No. : 0250740302

Customer—spec. information Customer : MB-NFZ Motor : OM366LA

Power KW : 140.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1419992198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1688901101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1680750089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

Set pneumatic shutoff device to control-rod stop = 0.5...1.5 mm control-rod travel at 4.5 bar atmospheric pressure.

Test hydr. locking device for starting with 800...1200 hPa air pressure.

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant. per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0

Tolerance bar : + 1.0

Prestroke mm : 4.55
Tolerance mm : + 0.05

test only : +- 0.10

Rack travel in mm : 21.00

Firing order : 1-5-3-6-2-

• 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance °NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1200

Rack travel in mm: 13.00

Tolerance mm : + 0.05

Del. quantity +	Spreed
cm3/1000 strokes : 118.0	Tolerance cm3/1000 strokes : 3.5
Tolerance	Check tolerance
cm3/1000 strokes : + 1.0	cm3/1000s. : 6.0
Check tolerance cm3/1000s. : + 3.0	RATED SPEED
Spreed	
Tolerance cm3/1000 strokes : 3.5	control lever position degree : 96.0 tolerance degree : +- 4.0
Check tolerance cm3/1000s. : 6.0	rack travel mm : 12.00 Rated speed rpm : 1245
Del. quantity cm3/1000 strokes : 12.0	Tolerance 1/min : +- 5
Tolerance	rack travel mm : 1.00
cm3/1000 strokes : + 2.0 + Check tolerance	Tolerance mm : + 0.70 Rated speed rpm : 1400
cm3/1000s. : +- 4.5	
Spreed + Tolerance +	LOW IDLE
cm3/1000 strokes : 3.5	
cm3/1000s. : 5.5	control lever position degree : 66.0
(B) SETTING OF INJECTION PUMP	tolerance degree : +- 4.0
WITH GOVERNOR	Testing:
+	Rated speed rpm : 350
GUIDE SLEEVE POSITION	rack travel mm : 3.30 Tolerance mm : +- 0.10
control lever	rack travel mm : 2.00
position degree : -3	Rated speed rpm : 100
Rated speed rpm : 800	CRT mm min. :> 19.00
Rack travel in mm: 0.50	51(1 mm (1111)
Tolerance mm : + 0.20	TORQUE CONTROL
governor spring pre-tension +	Rated speed rpm : 1200
click setting x : 4.50	rack travel mm : 13.00
	Tolerance mm : + 0.05
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 750 rack travel mm : 13.00
Rated speed rpm : 1200 Aneroid pressure	Tolerance mm : +- 0.10
hPa : 1000 +	
Del. quantity cm3/1000 strokes : 118.0	ANEROID/ALTITUDE COMPENSATOR TEST
Tolerance + 1.0 +	
Check tolerance +	SETTING
cm3/1000s. : +- 3.0 +	

Rated speed rpm Pressure hPa	: 500 : 1000
rack travel mm Tolerance mm	: 13.00 : +- 0.10
MEASUREMENT	
Pressure hPa	;
Rated speed rpm rack travel mm	: 500 : 9.65
Tolerance mm	: + 0.10
Rated speed rpm	: 500
Pressure hPa	: 700
Pressure hPa	: 350
rack travel mm Tolerance mm	: 10.00 : +- 0.10
TO COT COTOC HAN	5.10
FUEL DELIVERY CHA	ARACTERISTICS
	11/140 1 #1/170 1 TAA
Aneroid pressure hPa	: 1000
Rated speed rpm	: 750
Del. quantity cm3/1000 strokes	: 115.0
Tolerance	. 115.0
cm3/1000 strokes	: + 1.5
Check tolerance cm3/1000s.	: +- 4.0
Spreed	• • • • • • • • • • • • • • • • • • • •
Tolerance	: 5.5
cm3/1000 strokes Check tolerance	: 5.5
cm3/1000s.	: 7.0
Aneroid pressure hPa	: -
Rated speed rpm	500
Del. quantity cm3/1000 strokes	: 63.0
Tolerance	. 05.0
cm3/1000 strokes	: + 1.0
Check tolerance cm3/1000s.	: 3.0
BREAKAWAY	
	• 12.00
BREAKAWAY Rack travel in mm Rated speed rpm Tolerance 1/min	: 12.00 : 1245

Rated speed rpm Del. quantity	:	100
cm3/1000 strokes	:	150.0
Tolerance cm3/1000 strokes	: +-	5.0
Check tolerance cm3/1000s.	: +-	8.0

LOW IDLE		
Del. quantity		
cm3/1000 strokes	:	12.0
Tolerance		
cm3/1000 strokes	: +-	2.0
Check tolerance		
cm3/1000s.	; +-	4.5
Spreed		
Tolerance		
cm3/1000 strokes	:	3.5
Check tolerance		
cm3/1000s.	:	5.5

STARTING FUEL DELIVERY

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 24.03.95 Test oil : ISO 4113

Combination No. : 0403276008

Injection pump

Pump designation : PES6MW100/720RS1517

: -2

EP type number : 0413206019

Governor

Governer design. : RSV350...1300MW0A354

Governer no. : 0420085227

Cust. part No. : 0250740502

Customer-spec. information Customer : MB-NFZ Motor : OM366LA Power KW : 177.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40 Tolerance °C : + 2.0

Overflow valve : 1419992198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1688901101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1680750089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

Set pneumatic shutoff device to control-rod stop = 0.5...1.5 mm control-rod travel at 4.5 bar atmospheric pressure.

Test hydr. locking device for starting with 800...1200 hPa air pressure.

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 4.55 Tolerance mm : + 0.05

test only $: \leftarrow 0.10$

Rack travel in mm : 21.00

Firing order : 1-5-3-6-2-

. 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance "NW : + 0.75

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm : 14.40 Tolerance mm : + 0.05

Del. quantity + cm3/1000 strokes : 133.0 +	Spreed Tolerance
Tolerance	cm3/1000 strokes : 5.0 Check tolerance
cm3/1000 strokes : + 1.0	cm3/1000s. : 8.0
Check tolerance cm3/1000s. : +- 4.0	RATED SPEED
Spreed Tolerance	control lever
cm3/1000 strokes : 5.0	position degree : 104.0 tolerance degree : +- 4.0
Check tolerance cm3/1000s. : 8.0	rack travel mm : 1.00 Tolerance mm : +- 0.70
Del. quantity cm3/1000 strokes : 12.0	Rated speed rpm : 1600
Tolerance cm3/1000 strokes : + 2.0	rack travel mm : 4.00 Rated speed rpm : 1465
Check tolerance +	•
cm3/1000s. : + 4.5 +	rack travel mm : 13.40 Rated speed rpm : 1345
Tolerance + cm3/1000 strokes : 2.0 +	Tolerance 1/min : +- 5
Check tolerance tm3/1000s. : 4.0	LOW IDLE
1.0	
(B) SETTING OF INJECTION PUMP	Setting point w/out bumper spring
LITTU COVEDNOD	Data dana adams . 750
WITH GOVERNOR +	Rated speed rpm : 350 rack travel mm : 4.00
GUIDE SLEEVE POSITION	rack travel mm : 4.00 Testing: rack travel mm : 2.00
GUIDE SLEEVE POSITION control lever	rack travel mm : 4.00 Testing:
GUIDE SLEEVE POSITION control lever position degree : - 3	rack travel mm : 4.00 Testing: rack travel mm : 2.00 Rated speed rpm : 430 Tolerance 1/min : + 30
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800	rack travel mm : 4.00 Testing: rack travel mm : 2.00 Rated speed rpm : 430 Tolerance 1/min : + 30 Rated speed rpm : 100
GUIDE SLEEVE POSITION control lever position degree : - 3	rack travel mm : 4.00 Testing: rack travel mm : 2.00 Rated speed rpm : 430 Tolerance 1/min : + 30
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring	rack travel mm : 4.00 Testing: rack travel mm : 2.00 Rated speed rpm : 430 Tolerance 1/min : + 30 Rated speed rpm : 100
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20	rack travel mm : 4.00 Testing: rack travel mm : 2.00 Rated speed rpm : 430 Tolerance 1/min : + 30 Rated speed rpm : 100 CRT mm min. : > 19.00 TORQUE CONTROL Rated speed rpm : 1300
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.50	rack travel mm : 4.00 Testing: rack travel mm : 2.00 Rated speed rpm : 430 Tolerance 1/min : + 30 Rated speed rpm : 100 CRT mm min. : > 19.00 TORQUE CONTROL
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension	rack travel mm : 4.00 Testing: rack travel mm : 2.00 Rated speed rpm : 430 Tolerance 1/min : + 30 Rated speed rpm : 100 CRT mm min. :> 19.00 TORQUE CONTROL Rated speed rpm : 1300 rack travel mm : 14.40 Tolerance mm : + 0.05
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1300	rack travel mm : 4.00 Testing: rack travel mm : 2.00 Rated speed rpm : 430 Tolerance 1/min : + 30 Rated speed rpm : 100 CRT mm min. :> 19.00 TORQUE CONTROL Rated speed rpm : 1300 rack travel mm : 14.40 Tolerance mm : + 0.05 Rated speed rpm : 750 rack travel mm : 14.40
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1300 Aneroid pressure hPa : 1200	rack travel mm : 4.00 Testing: rack travel mm : 2.00 Rated speed rpm : 430 Tolerance 1/min : + 30 Rated speed rpm : 100 CRT mm min. :> 19.00 TORQUE CONTROL Rated speed rpm : 1300 rack travel mm : 14.40 Tolerance mm : + 0.05 Rated speed rpm : 750
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1300 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 133.0	rack travel mm : 4.00 Testing: rack travel mm : 2.00 Rated speed rpm : 430 Tolerance 1/min : + 30 Rated speed rpm : 100 CRT mm min. :> 19.00 TORQUE CONTROL Rated speed rpm : 1300 rack travel mm : 14.40 Tolerance mm : 750 rack travel mm : 14.40 Tolerance mm : 14.40
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1300 Aneroid pressure hPa : 1200 Del. quantity	rack travel mm : 4.00 Testing: rack travel mm : 2.00 Rated speed rpm : 430 Tolerance 1/min : + 30 Rated speed rpm : 100 CRT mm min. : > 19.00 TORQUE CONTROL Rated speed rpm : 1300 rack travel mm : 14.40 Tolerance mm : 750 rack travel mm : 14.40 Tolerance mm : 14.40 Tolerance mm : 14.40 Tolerance mm : 14.40 Tolerance mm : 14.40
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1300 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 133.0 Tolerance	rack travel mm : 4.00 Testing: rack travel mm : 2.00 Rated speed rpm : 430 Tolerance 1/min : + 30 Rated speed rpm : 100 CRT mm min. :> 19.00 TORQUE CONTROL Rated speed rpm : 1300 rack travel mm : 14.40 Tolerance mm : 750 rack travel mm : 14.40 Tolerance mm : 14.40

Rated speed rpm Pressure hPa rack travel mm Tolerance mm	•	500 1200 14.40 +- 0.10
MEASUREMENT		

Pressure hPa	:	-
Rated speed rpm	:	500
Tolerance mm	:	← 0.10

Rated	speed	rpm	:	500
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Pressure hPa	:	800
rack travel mm	:	4.30
Tolerance mm	: +	-0.10

Pressure hPa	:	450
rack travel mm	:	1.90
Tolerance mm	: +	- 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure		
hPa	:	1200
Rated speed rpm		750
Del. quantity		
cm3/1000 strokes	:	132.0
Tolerance		
cm3/1000 strokes	: -	⊢ 2.0
Check tolerance		
cm3/1000s.	: -	⊢ 5.0
Spreed		
Tolerance		
cm3/1000 strokes	:	6.0
Check tolerance		0.0
cm3/1000s.		9.0

:		9.0
:		_
:		500
:		46.0
•	+-	1.0
:	+-	3.0
	• • • • • • • • • • • • • • • • • • • •	: +-

STARTING FUEL DELIVERY

Rated speed rpm	:	100
Del. quantity		
cm3/1000 strokes	:	160.0

Tolerance cm3/1000 strokes	: +-	5.0
Check tolerance cm3/1000s.	: +-	8.0

Del. quantity		
cm3/1000 strokes	:	12.0
Tolerance		
cm3/1000 strokes	: +-	2.0
Check tolerance		
cm3/1000s.	: +-	4.5
Spreed		
Tolerance		
cm3/1000 strokes	:	2.0
Check tolerance		
cm3/1000s.	:	4.8

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 24.03.95 Test oil : ISO 4113

Combination No. : 0403276009

Injection pump

Pump designation : PES6MW100/720RS1517

: -2

EP type number : 0413206019

Governor

Governer design. : RSV350...1200MWDA357

Governer no. : 0420085233

Cust. part No. : 0250740402

Customer-spec. information Customer : MB-NFZ Motor : OM366LA Power KW : 155.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1419992198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1688901101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1680750089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

Set pneumatic shutoff device to control-rod stop = 0.5...1.5 mm control-rod travel at 4.5 bar atmospheric pressure.

Test hydr. locking device for starting with 800...1200 hPa air pressure.

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 4.55
Tolerance mm : + 0.05

test only $: \leftarrow 0.10$

Rack travel in mm : 21.00

Firing order : 1-5-3-6-2-

• 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance °NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1200

Rack travel in mm : 13.30 Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 118.0	Spreed Tolerance
Tolerance	cm3/1000 strokes : 4.5 Check tolerance
cm3/1000 strokes : + 1.0	cm3/1000s. : 7.0
Check tolerance cm3/1000s. : +- 3.0	RATED SPEED
Spreed Tolerance	control lever
cm3/1000 strokes : 4.5 Check tolerance	position degree : 108.0 tolerance degree : + 4.0
cm3/1000s. : 7.0	rack travel mm : 1.00 Tolerance mm : + 0.70
Del. quantity cm3/1000 strokes : 12.0	Rated speed rpm : 1450
cm3/1000 strokes : + 2.0 Check tolerance	rack travel mm : 4.00 Rated speed rpm : 1375
cm3/1000s. : +- 4.5 Spreed +-	rack travel mm : 12.30 Rated speed rpm : 1245
Tolerance + cm3/1000 strokes : 2.0 + Check tolerance + cm3/1000 strokes : 2.0 + cm3/1000 strokes	Tolerance 1/min : +- 5
cm3/1000s. : 4.0	LOW IDLE
(B) SETTING OF INJECTION PUMP	Setting point w/out bumper spring
WITH GOVERNOR	Rated speed rpm : 350 rack travel mm : 3.90
GUIDE SLEEVE POSITION	Testing:
control lever	rack travel mm : 2.00 Rated speed rpm : 430
position degree : -3 Rated speed rpm : 800	Rated speed rpm : 100
Rack travel in mm: 0.50	CRT mm min. :> 19.00
Tolerance mm : + 0.20	TORQUE CONTROL
governor spring pre-tension	Rated speed rpm : 1200
click setting x : 4.50	rack travel mm : 13.30 Tolerance mm : + 0.05
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 750 rack travel mm : 13.30
Rated speed rpm : 1200 Aneroid pressure	Tolerance mm : +- 0.10
hPa : 1300 + Del. quantity + 1400	ANEROID/ALTITUDE
cm3/1000 strokes : 118.0	COMPENSATOR TEST
cm3/1000 strokes : + 1.0 Check tolerance	SETTING
cm3/1000s. : + 3.0 +	

Rated speed rpm	:	500
Pressure hPa	:	1300
rack travel mm	:	13.30
Tolerance mm	: 4	⊢ 0.10

MEASUREMENT

Pressure hPa	:	-
Rated speed rpm	:	500
Tolerance mm	:	+ 0.10

Rated speed	rpm	:	500
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Pressure hPa	:	600
rack travel mm	:	3.00
Tolerance mm	: +	- 0.10

Pressure hPa	:	300
rack travel mm	:	1.20
Tolerance mm	: -	→ 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pres	sure
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hPa	•	1300
Rated speed rpm		750
Del. quantity		

cm3/1000 strokes : 117.0

Tolerance

cm3/1000 strokes : +-1.5

Check tolerance cm3/1000s.

4.0

Spreed Tolerance

cm3/1000 strokes : 6.0

Check tolerance cm3/1000s. 9.0

Aneroid pressure

hPa 500 Rated speed rpm

Del. quantity cm3/1000 strokes : 48.0

Tolerance

cm3/1000 strokes : +-1.0

Check tolerance cm3/1000s. 3.0 : +-

STARTING FUEL DELIVERY

Rated speed rpm	:	100
Del. quantity cm3/1000 strokes	:	145.0

Tolerance

cm3/1000 strokes : +- 5.0

Check tolerance		
cm3/1000s.	: +-	8.0

:	12.0
: +-	2.0
: +-	4.5
:	2.0
:	4.0
	: : +- : +-

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 27.03.95 Test oil : ISO 4113

Combination No. : 0403446177

Injection pump

Pump designation : PES6MW100/720RS1144

EP type number : 0413406138

Governor

Governer design. : RQV300...1300MW48

Governer no. : 0420083066

Cust. part No. :

Customer—spec. information
Customer : MB-NFZ
Motor : OM366A
Power KW : 125.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1417413047

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1688901101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1680750015

Outside diameter : 6.0

x inside diameter: 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 3.75
Tolerance mm : + 0.05

test only : + 0.10

Rack travel in mm : 10.50
Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm : 11.05
Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 78.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : +- 3.0

Spreed

Tolerance

cm3/1000 strokes : 3.5

	+ tolerance degree : + 4.0
Check tolerance	+
cm3/1000s. : 6.0	+ rack travel mm : 10.00
2nd and an 200	+ Rated speed rpm : 1345
2nd speed rpm : 300	Tolerance 1/min : +- 5
Rack travel in mm : 7.90	rack travel mm : 4.00
Tolerance mm : +- 0.20	+ Rated speed rpm : 1440
Del. quantity	+ Tolerance 1/min : +- 15
cm3/1000 strokes : 11.0	+
Tolerance	+ rack travel mm : 0.50
cm3/1000 strokes : +- 2.0	+ Tolerance mm : + 0.50
Check tolerance	+ Rated speed rpm : 1550
cm3/1000s. : ← 4.5	†
Spreed Tolerance	LOW IDLE
cm3/1000 strokes : 3.5	I COM TOLE
Check tolerance	
cm3/1000s. : 5.5	+ control lever
	position degree : 83.0
	+ tolerance degree : +- 4.0
(B) SETTING OF INJECTION PUMP	†
WITH GOVERNOR	+ Testing:
	Rated speed rpm : 300
	rack travel mm : 7.90
GUIDE SLEEVE POSITION	+ Tolerance mm : +10
	+
	+ Rated speed rpm : 100
control lever	†
position degree : - 1 Rated speed rpm : 1280	+ CRT mm min. : > 8.70
Rated speed rpm : 1280	<u> </u>
Rack travel in mm : 16.50	+ CONTINUOUS-ACTION CONTROL
Tolerance mm : + 1.30	+
	+ Rated speed rpm : 415
FULL LOAD DELIVERY AT FULL LOAD STOP	†
FOLL EVAN DELIVERY AT FOLL EVAN STOP	TORQUE CONTROL
Rated speed rpm : 1300	- Tonge continue
Aneroid pressure	+ Rated speed rpm : 1300
hPa : ~	+ rack travel mm : 11.05
Del. quantity	+ Tolerance mm : + 0.05
cm3/1000 strokes : 78.0	†
Tolerance cm3/1000 strokes : + 1.0	+ Rated speed rpm : 800 + rack travel mm : 11.90
Check tolerance	+ Tolerance mm : + 0.10
cm3/1000s. : +- 3.0	T rocer ance min
Spreed	Rated speed rpm : 585
Tolerance	
cm3/1000 strokes : 3.5	rack travel mm : 12.10 Tolerance mm : + 0.10
Charle talarana	
Check tolerance	+
cm3/1000s. : 6.0	Rated speed rpm : 1100
	rack travel mm : 11.20
cm3/1000s. : 6.0	
	rack travel mm : 11.20
cm3/1000s. : 6.0	rack travel mm : 11.20
cm3/1000s. : 6.0 RATED SPEED control lever	rack travel mm : 11.20
cm3/1000s. : 6.0 RATED SPEED	rack travel mm : 11.20 Tolerance mm : + 0.10

Rated speed rpm	: > 100
Check	
speed 1/min	: > 80
Rated speed rpm	: < 230
Check	
speed 1/min	: < 250
•	
FUEL DELIVERY CHA	ARACTERISTICS
Aneroid pressure	
hPa	: -
Rated speed rpm	: 800
Del. quantity	
cm3/1000 strokes	: 77.0
Tolerance	. –
cm3/1000 strokes	: + 1.5
Check tolerance	
cm3/1000s.	: +- 4.0
Spreed	
Tolerance	. 50
cm3/1000 strokes	: 5.0
Check tolerance	. 7.0
cm3/1000s.	: 7.0
Amanaid masassas	
Aneroid pressure hPa	
	: 585
Rated speed rpm	: 202
Del. quantity cm3/1000 strokes	: 70.0
Tolerance	: 70.0
cm3/1000 strokes	: +- 1.5
Check tolerance	. + 1.5
cm3/1000s.	: +- 4.0
BREAKAWAY	
DREADAWAT	
Rack travel in mm	
Rated speed rpm	: 1345
Tolerance 1/min	: +- 5
STARTING FUEL DEL	IVERY
	400
Rated speed rpm	: 100
Del. quantity	07.5
cm3/1000 strokes	: 83.0
Tolerance	
cm3/1000 strokes	: +- 5.0
Check tolerance	
cm3/1000s.	: +- 8.0
	

Rated speed rpm	:		300
rack travel mm	:		7.90
Tolerance mm	:	+-	0.20
Del. quantity			
cm3/1000 strokes	:		11.0
Tolerance			
cm3/1000 strokes	:	+-	2.0
Check tolerance			
cm3/1000s.	:	+-	4.5
Spreed			
Tolerance			
cm3/1000 strokes	:		3.5
Check tolerance			
cm3/1000s.	:		5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 27.03.95 Test oil : ISO 4113

Combination No. : 0403446207

Injection pump

Pump designation : PES6MW100/720RS1144

EP type number : 0413406138

Governor

Governer design. : RQ300/1300MW96 Governer no. : 0420082032

Cust. part No. : 0160747802

Customer—spec. information Customer : MB—NFZ Motor : OM366A

Power KW : 125.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1417413047

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1688901101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1680750015

Outside diameter : 6.0

x inside diameter: 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 31.0
Tolerance bar : + 1.0

Prestroke mm : 3.75Tolerance mm : $\leftarrow 0.05$

test only : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.50

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm: 11.05
Tolerance mm: + 0.05

Del. quantity

cm3/1000 strokes : 78.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : +-- 3.0

Spreed

Tolerance

cm3/1000 strokes : 3.5

	+ Rated speed rpm : 1345
Check tolerance	+ Tolerance 1/min : + 5
cm3/1000s. : 6.0	+
	+ rack travel mm : 4.00
2nd speed rpm : 300	+ Rated speed rpm : 1440
	+ Tolerance 1/min : +- 15
Rack travel in mm : 7.90	+
Tolerance mm : +- 0.20	+ rack travel mm : 0.50
Del. quantity	+ Tolerance mm : + 0.50
cm3/1000 strokes : 11.0	+ Rated speed rpm : 1550
Tolerance	+
cm3/1000 strokes : + 2.0	
Check tolerance	+ LOW IDLE
cm3/1000s. : ← 4.5	+
Spreed	+
Tolerance	+ control lever
cm3/1000 strokes : 3.5	+ position degree : 77.0
Check tolerance	+ tolerance degree : + 4.0
cm3/1000s. : 5.5	†
	+ Testing:
(D) CETTING OF THIS COTTON OF THE	700
(B) SETTING OF INJECTION PUMP	+ Rated speed rpm : 300
WITH GOVERNOR	+ rack travel mm : 7.90
	† Tolerance mm : + 0.10
	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7
GUIDE SLEEVE POSITION	rack travel mm : 2.00
GOIDE SPEEKE LOSTITON	Dotted around norm at 100
Rated speed rpm : 1200	Rated speed rpm : 100
Rated speed rpm : 1200	+ CRT mm min. :> 9.00
Rack travel in mm : 13.50	T CRI mm mm. : 2 9.00
Tolerance mm : + 0.80	I
10 (et al (ce illi) . ' 0.00	T
	TOPOLIE CONTROL
	TORQUE CONTROL
	+
FULL LOAD DELIVERY AT FULL LOAD STOP	+ Rated speed rpm : 1300
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 1300 + rack travel mm : 11.05
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1300	+ Rated speed rpm : 1300
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1300 Aneroid pressure	Rated speed rpm : 1300 rack travel mm : 11.05 Tolerance mm : + 0.05
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1300 Aneroid pressure hPa : -	Rated speed rpm : 1300 rack travel mm : 11.05 Tolerance mm : + 0.05 Rated speed rpm : 800
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1300 Aneroid pressure hPa : - Del. quantity	Rated speed rpm : 1300 rack travel mm : 11.05 Tolerance mm : + 0.05 Rated speed rpm : 800 rack travel mm : 11.90
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1300 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 78.0 Tolerance	Rated speed rpm : 1300 rack travel mm : 11.05 Tolerance mm : + 0.05 Rated speed rpm : 800
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1300 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 78.0 Tolerance	Rated speed rpm : 1300 rack travel mm : 11.05 Tolerance mm : + 0.05 Rated speed rpm : 800 rack travel mm : 11.90 Tolerance mm : + 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1300 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 78.0	Rated speed rpm : 1300 rack travel mm : 11.05 Tolerance mm : + 0.05 Rated speed rpm : 800 rack travel mm : 11.90 Tolerance mm : + 0.10 Rated speed rpm : 585
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1300 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 78.0 Tolerance cm3/1000 strokes : + 1.0	Rated speed rpm : 1300 rack travel mm : 11.05 Tolerance mm : + 0.05 Rated speed rpm : 800 rack travel mm : 11.90 Tolerance mm : + 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1300 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 78.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance	Rated speed rpm : 1300 rack travel mm : 11.05 Tolerance mm : + 0.05 Rated speed rpm : 800 rack travel mm : 11.90 Tolerance mm : + 0.10 Rated speed rpm : 585 rack travel mm : 12.10
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1300 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 78.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance	Rated speed rpm : 1300 rack travel mm : 11.05 Tolerance mm : + 0.05 Rated speed rpm : 800 rack travel mm : 11.90 Tolerance mm : + 0.10 Rated speed rpm : 585 rack travel mm : 12.10 Tolerance mm : + 0.10 Rated speed rpm : 1100
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1300 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 78.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0 Spreed	Rated speed rpm : 1300 rack travel mm : 11.05 Tolerance mm : + 0.05 Rated speed rpm : 800 rack travel mm : 11.90 Tolerance mm : + 0.10 Rated speed rpm : 585 rack travel mm : 12.10 Tolerance mm : + 0.10 Rated speed rpm : 1100
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1300 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 78.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance	Rated speed rpm : 1300 rack travel mm : 11.05 Tolerance mm : + 0.05 Rated speed rpm : 800 rack travel mm : 11.90 Tolerance mm : + 0.10 Rated speed rpm : 585 rack travel mm : 12.10 Tolerance mm : + 0.10 Rated speed rpm : 1100
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1300 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 78.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 3.5	Rated speed rpm : 1300 rack travel mm : 11.05 Tolerance mm : + 0.05 Rated speed rpm : 800 rack travel mm : 11.90 Tolerance mm : + 0.10 Rated speed rpm : 585 rack travel mm : 12.10 Tolerance mm : + 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1300 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 78.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance	Rated speed rpm : 1300 rack travel mm : 11.05 Tolerance mm : + 0.05 Rated speed rpm : 800 rack travel mm : 11.90 Tolerance mm : + 0.10 Rated speed rpm : 585 rack travel mm : 12.10 Tolerance mm : + 0.10 Rated speed rpm : 1100
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1300 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 78.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance	Rated speed rpm : 1300 rack travel mm : 11.05 Tolerance mm : + 0.05 Rated speed rpm : 800 rack travel mm : 11.90 Tolerance mm : + 0.10 Rated speed rpm : 585 rack travel mm : 12.10 Tolerance mm : + 0.10 Rated speed rpm : 1100 rack travel mm : 11.20 Tolerance mm : + 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1300 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 78.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance	Rated speed rpm : 1300 rack travel mm : 11.05 Tolerance mm : + 0.05 Rated speed rpm : 800 rack travel mm : 11.90 Tolerance mm : + 0.10 Rated speed rpm : 585 rack travel mm : 12.10 Tolerance mm : + 0.10 Rated speed rpm : 1100
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1300 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 78.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000 strokes : 6.0	Rated speed rpm : 1300 rack travel mm : 11.05 Tolerance mm : + 0.05 Rated speed rpm : 800 rack travel mm : 11.90 Tolerance mm : + 0.10 Rated speed rpm : 585 rack travel mm : 12.10 Tolerance mm : + 0.10 Rated speed rpm : 1100 rack travel mm : 11.20 Tolerance mm : + 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1300 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 78.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000 strokes : 6.0	Rated speed rpm : 1300 rack travel mm : 11.05 Tolerance mm : + 0.05 Rated speed rpm : 800 rack travel mm : 11.90 Tolerance mm : + 0.10 Rated speed rpm : 585 rack travel mm : 12.10 Tolerance mm : + 0.10 Rated speed rpm : 1100 rack travel mm : 11.20 Tolerance mm : + 0.10 START CUT-OUT Rated speed rpm : > 100
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1300 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 78.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 6.0 RATED SPEED	Rated speed rpm : 1300 rack travel mm : 11.05 Tolerance mm : + 0.05 Rated speed rpm : 800 rack travel mm : 11.90 Tolerance mm : + 0.10 Rated speed rpm : 585 rack travel mm : 12.10 Tolerance mm : + 0.10 Rated speed rpm : 1100 rack travel mm : 11.20 Tolerance mm : + 0.10 START CUT-OUT Rated speed rpm : > 100 Check
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1300 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 78.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 6.0 RATED SPEED control lever position degree : 100.0	Rated speed rpm : 1300 rack travel mm : 11.05 Tolerance mm : + 0.05 Rated speed rpm : 800 rack travel mm : 11.90 Tolerance mm : + 0.10 Rated speed rpm : 585 rack travel mm : 12.10 Tolerance mm : + 0.10 Rated speed rpm : 1100 rack travel mm : 11.20 Tolerance mm : + 0.10 START CUT-OUT Rated speed rpm : > 100 Check speed 1/min : > 80
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1300 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 78.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 6.0 RATED SPEED	Rated speed rpm : 1300 rack travel mm : 11.05 Tolerance mm : + 0.05 Rated speed rpm : 800 rack travel mm : 11.90 Tolerance mm : + 0.10 Rated speed rpm : 585 rack travel mm : 12.10 Tolerance mm : + 0.10 Rated speed rpm : 1100 rack travel mm : 11.20 Tolerance mm : + 0.10 START CUT-OUT Rated speed rpm : > 100 Check speed 1/min :> 80 Rated speed rpm : < 180
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1300 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 78.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000 strokes : 6.0 RATED SPEED control lever position degree : 100.0 tolerance degree : + 4.0	Rated speed rpm : 1300 rack travel mm : 11.05 Tolerance mm : + 0.05 Rated speed rpm : 800 rack travel mm : 11.90 Tolerance mm : + 0.10 Rated speed rpm : 585 rack travel mm : 12.10 Tolerance mm : + 0.10 Rated speed rpm : 1100 rack travel mm : 11.20 Tolerance mm : + 0.10 START CUT-OUT Rated speed rpm : > 100 Check speed 1/min :> 80 Rated speed rpm : < 180 Check
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1300 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 78.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 6.0 RATED SPEED control lever position degree : 100.0	Rated speed rpm : 1300 rack travel mm : 11.05 Tolerance mm : + 0.05 Rated speed rpm : 800 rack travel mm : 11.90 Tolerance mm : + 0.10 Rated speed rpm : 585 rack travel mm : 12.10 Tolerance mm : + 0.10 Rated speed rpm : 1100 rack travel mm : 11.20 Tolerance mm : + 0.10 START CUT-OUT Rated speed rpm : > 100 Check speed 1/min :> 80 Rated speed rpm : < 180

FUEL DELIVERY CHA	ARACTERISTICS
Aneroid pressure	
hPa	- 200
Rated speed rpm Del. quantity	: 800
cm3/1000 strokes	: 77.0
Tolerance	
cm3/1000 strokes	: +- 1.5
Check tolerance	
cm3/1000s. Spreed	: +- 4.0
Tolerance	
cm3/1000 strakes	: 5.0
Check tolerance	
cm3/1000s.	: 7.0
Aneroid pressure	
hPa	: -
Rated speed rpm	: 585
Del. quantity	
cm3/1000 strokes	: 70.0
Tolerance cm3/1000 strokes	: +- 1.5
Check tolerance	
cm3/1000s.	: +- 4.0
Rack travel in mm	
Rated speed rpm	: 1345
Tolerance 1/min	: 5
STARTING FUEL DEL	IVERY
Rated speed rpm	: 100
Del. quantity cm3/1000 strokes	: 83.0
Tolerance cm3/1000 strokes	: +- 5.0
Check tolerance	· · · · · · · · · · · · · · · · · · ·
cm3/1000s.	: +- 8.0
LOW IDLE	
	700
Rated speed rpm rack travel mm	: 300 : 7.90
rack travel mm Tolerance mm	: 7.90 : +- 0.20
Del. quantity	
cm3/1000 strokes	: 11.0

Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed	: +- : +-	2.0 4.5
Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	:	3.5 5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 29.03.95 Test oil : ISO 4113

Combination No. : 0403476085

Injection pump

Pump designation : PES6MW100/720RS1205

EP type number : 0413406195

Governor

Governer design. : RSV350...1300MW0A329

: -7

Governer no. : 0420085142

Cust. part No. :

Customer—spec. information Customer : MB-NFZ Motor : OM 366 LA Power KW : 184.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1419992198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1688901101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1680750089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

Test hydr. locking device for starting with 500...1000 hPa air pressure.

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 3.25
Tolerance mm : + ..05

test only : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300 Tolerance : + 0.50

Check

tolerance *NW : + 0.75

BASIC SETTING

Rated speed rpm : 1280

Rack travel in mm: 15.55
Tolerance mm: + 0.05

Del. quantity

cm3/1000 strokes : 124.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance - cm3/1000s. : +- 3.0 -	Tolerance : 3.5
Spreed	Check tolerance cm3/1000s. : 6.0
Tolerance - cm3/1000 strokes : 3.5 -	RATED SPEED
Check tolerance cm3/1000s. : 6.0	RATED SPEED
2nd speed rpm : 350	control lever position degree : 100.0
Rack travel in mm : 6.40 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 12.0	tolerance degree : + 4.0 rack travel mm : 14.50 Rated speed rpm : 1335 Tolerance 1/min : + 5
Tolerance cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000s. : +- 4.5	rack travel mm : 4.00 Rated speed rpm : 1435 Tolerance 1/min : +- 15
Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 5.5	rack travel mm : 1.00 Tolerance mm : +- 0.70 Rated speed rpm : 1580
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	LOW IDLE control lever position degree : 69.0
GUIDE SLEEVE POSITION	tolerance degree : +- 4.0 Testing:
control lever position degree : - 3 Rated speed rpm : 800	Rated speed rpm : 350 rack travel mm : 6.40 Tolerance mm : + 0.10
Rack travel in mm: 0.65 Tolerance mm: + 0.35	- rack travel mm : 2.00
governor spring	- Rated speed rpm : 100
pre-tension click setting x : 3.75	- CRT mm min. : > 19.00
FULL LOAD DELIVERY AT FULL LOAD STOP	TORQUE CONTROL
Rated speed rpm : 1280 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 124.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 3.0	Rated speed rpm : 1280 rack travel mm : 15.55 Tolerance mm : + 0.05 Rated speed rpm : 800 rack travel mm : 15.55 Tolerance mm : + 0.10
Spreed	

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1200
rack travel mm : 15.55
Tolerance mm : + 0.05

MEASUREMENT

Pressure hPa : Rated speed rpm : 500
rack travel mm : 11.35
Tolerance mm : + 0.05

Rated speed rpm : 500

Pressure hPa : 650 rack travel mm : 14.00 Tolerance mm : + 0.10

Pressure hPa : 450 rack travel mm : 12.80 Tolerance mm : + 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

Aneroid pressure

1200 hPa Rated speed rpm 800 Del. quantity cm3/1000 strokes : 122.0 Tolerance cm3/1000 strokes 1.5 Check tolerance cm3/1000s. 4.0 Spreed Tolerance cm3/1000 strokes 5.0 Check tolerance cm3/1000s. 7.0

hPa : Rated speed rpm : 500
Del. quantity
cm3/1000 strokes : 48.0
Tolerance
cm3/1000 strokes : + 1.0
Check tolerance
cm3/1000s. : + 3.0

BREAKAWAY

Rack travel in mm: 14.50
Rated speed rpm: 1335
Tolerance 1/min: +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
Del. quantity
cm3/1000 strokes : 115.0
Tolerance
cm3/1000 strokes : + 5.0
Check tolerance
cm3/1000s. : + 8.0

Rated speed rpm	:	٥ر
rack travel mm	:	6.40
Tolerance mm	: +-	0.20
Del. quantity		
cm3/1000 strokes	•	12.0
Tolerance		
cm3/1000 strokes	: +-	2.0
Check tolerance		
cm3/1000s.	: +-	4.5
Spreed		
Tolerance		
cm3/1000 strokes	:	3.5
Check tolerance		
cm3/1000s.	:	5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 29.03.95 Test oil : ISO 4113

Combination No. : 0403476138

Injection pump

Pump designation : PES6MW100/720RS1130

: -3

EP type number : 0413406235

Governor

Governer design. : RSV350...1300MW0A318

Governer ro. : 0420085052

Cust. part No. : 0250748802

Customer—spec. information Customer : MB-NFZ Motor : OM 366 A

Power KW : 125.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1419992198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1688901101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1680750089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant. per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 3.75
Tolerance mm : + 0.05

test only : \leftarrow 0.10

Rack travel in mm : 0.50
Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance $^{\circ}NW$: +- 0.75

BASIC SETTING

Rated speed rpm : 1280

Rack travel in mm : 11.10 Tolerance mm : + 0.10

Del. quantity

cm3/1000 strokes : 77.0

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Check tolerance

cm3/1000s. : +- 3.0

Spreed

Tolerance + cm3/1000 strokes : 3.5 +	
5.5	RATED SPEED
Check tolerance	Willey of Leb
cm3/1000s. : 6.0	
+	control lever
2nd speed rpm : 350 +	position degree : 107.0
+	tolerance degree : +- 4.0
Rack travel in mm: 6.40	
Tolerance mm : + 0.20	rack travel mm : 10.00
Del. quantity	Rated speed rpm : 1325
cm3/1000 strokes : 11.0	Tolerance 1/min : +- 5
cm3/1000 strokes : +- 2.0	rack travel mm : 4.00
Check tolerance	Rated speed rpm : 1395
cm3/1000s. : +- 4.5	Tolerance 1/min : + 15
Spreed	
Tolerance	rack travel mm : 1.00
cm3/1000 strokes : 3.5 +	Tolerance mm : + 0.70
Check tolerance	Rated speed rpm : 1560
cm3/1000s. : 5.5	
+	LAU TALE
(B) SETTING OF INJECTION PUMP	LOW IDLE
WITH GOVERNOR	
T T	control lever
1	position degree : '8.0
	tolerance degree : + 4.0
GUIDE SLEEVE POSITION	
+	Testing:
+	
control lever	Rated speed rpm : 350
position degree : - 3	rack travel mm : 6.40
Rated speed rpm : 800	rack travel mm : 6.40 Tolerance mm : + 0.10
Rated speed rpm : 800	Tolerance mm : + 0.10
Rated speed rpm : 800 Rack travel in mm : 0.65	Tolerance mm : + 0.10 rack travel mm : 2.00
Rated speed rpm : 800	Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 470
Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35	Tolerance mm : + 0.10 rack travel mm : 2.00
Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension	Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 470
Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring	Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 470 Tolerance 1/min : + 30 Rated speed rpm : 100
Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension	Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 470 Tolerance 1/min : + 30
Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension click setting x : 6.25	Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 470 Tolerance 1/min : + 30 Rated speed rpm : 100
Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension	Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 470 Tolerance 1/min : + 30 Rated speed rpm : 100 CRT mm min. : > 19.00
Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension click setting x : 6.25 FULL LOAD DELIVERY AT FULL LOAD STOP	Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 470 Tolerance 1/min : + 30 Rated speed rpm : 100
Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension click setting x : 6.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1280	Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 470 Tolerance 1/min : + 30 Rated speed rpm : 100 CRT mm min. : > 19.00 TORQUE CONTROL
Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension click setting x : 6.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1280 Aneroid pressure	Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 470 Tolerance 1/min : + 30 Rated speed rpm : 100 CRT mm min. : > 19.00 TORQUE CONTROL Rated speed rpm : 1280
Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension click setting x : 6.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1280 Aneroid pressure hPa : -	Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 470 Tolerance 1/min : + 30 Rated speed rpm : 100 CRT mm min. : > 19.00 TORQUE CONTROL
Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension click setting x : 6.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1280 Aneroid pressure	Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 470 Tolerance 1/min : + 30 Rated speed rpm : 100 CRT mm min. : > 19.00 TORQUE CONTROL Rated speed rpm : 1280 rack travel mm : 11.10 Tolerance mm : + 0.10
Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension click setting x : 6.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1280 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 77.0 Tolerance	Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 470 Tolerance 1/min : + 30 Rated speed rpm : 100 CRT mm min. : > 19.00 TORQUE CONTROL Rated speed rpm : 1280 rack travel mm : 11.10 Tolerance mm : + 0.10 Rated speed rpm : 750
Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension click setting x : 6.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1280 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 77.0 Tolerance cm3/1000 strokes : + 1.0	Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 470 Tolerance 1/min : + 30 Rated speed rpm : 100 CRT mm min. : > 19.00 TORQUE CONTROL Rated speed rpm : 1280 rack travel mm : 11.10 Tolerance mm : + 0.10 Rated speed rpm : 750 rack travel mm : 11.60
Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension click setting x : 6.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1280 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 77.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance	Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 470 Tolerance 1/min : + 30 Rated speed rpm : 100 CRT mm min. : > 19.00 TORQUE CONTROL Rated speed rpm : 1280 rack travel mm : 11.10 Tolerance mm : + 0.10 Rated speed rpm : 750
Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension click setting x : 6.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1280 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 77.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cni3/1000s. : + 3.0	Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 470 Tolerance 1/min : + 30 Rated speed rpm : 100 CRT mm min. : > 19.00 TORQUE CONTROL Rated speed rpm : 1280 rack travel mm : 11.10 Tolerance mm : + 0.10 Rated speed rpm : 750 rack travel mm : 11.60 Tolerance mm : + 0.05
Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension click setting x : 6.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1280 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 77.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cni3/1000s. : + 3.0 Spreed	Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 470 Tolerance 1/min : + 30 Rated speed rpm : 100 CRT mm min. : > 19.00 TORQUE CONTROL Rated speed rpm : 1280 rack travel mm : 11.10 Tolerance mm : + 0.10 Rated speed rpm : 750 rack travel mm : 11.60 Tolerance mm : + 0.05 Rated speed rpm : 825
Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension click setting x : 6.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1280 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 77.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cni3/1000s. : + 3.0 Spreed Tolerance	Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 470 Tolerance 1/min : + 30 Rated speed rpm : 100 CRT mm min. : > 19.00 TORQUE CONTROL Rated speed rpm : 1280 rack travel mm : 11.10 Tolerance mm : + 0.10 Rated speed rpm : 750 rack travel mm : 11.60 Tolerance mm : + 0.05 Rated speed rpm : 825
Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension click setting x : 6.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1280 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 77.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cni3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 3.5	Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 470 Tolerance 1/min : + 30 Rated speed rpm : 100 CRT mm min. : > 19.00 TORQUE CONTROL Rated speed rpm : 1280 rack travel mm : 11.10 Tolerance mm : + 0.10 Rated speed rpm : 750 rack travel mm : 11.60 Tolerance mm : + 0.05
Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension click setting x : 6.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1280 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 77.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cni3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance	Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 470 Tolerance 1/min : + 30 Rated speed rpm : 100 CRT mm min. : > 19.00 TORQUE CONTROL Rated speed rpm : 1280 rack travel mm : 11.10 Tolerance mm : + 0.10 Rated speed rpm : 750 rack travel mm : 11.60 Tolerance mm : + 0.05 Rated speed rpm : 825
Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension click setting x : 6.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1280 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 77.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cni3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 3.5	Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 470 Tolerance 1/min : + 30 Rated speed rpm : 100 CRT mm min. : > 19.00 TORQUE CONTROL Rated speed rpm : 1280 rack travel mm : 11.10 Tolerance mm : + 0.10 Rated speed rpm : 750 rack travel mm : 11.60 Tolerance mm : + 0.05 Rated speed rpm : 825

FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa 750 Rated speed rpm Del. quantity cm3/1000 strokes : 74.0 Tolerance cm3/1000 strokes : +-1.5 Check tolerance cm3/1000s.4.0 Spreed Tolerance cm3/1000 strokes 5.0 Check tolerance cm3/1000s. 7.0 BREAKAWAY Rack travel in mm: 10.00 Rated speed rpm 1325 Tolerance 1/min STARTING FUEL DELIVERY 100 Rated speed rpm Del. quantity cm3/1000 strokes : 83.0 Tolerance cm3/1000 strokes 5.0 Check tolerance cm3/1000s. 8.0 LOW IDLE 350 Rated speed rpm rack travel mm 6.40 Tolerance mm 0.20 Del. quantity cm3/1000 strokes : 11.0 Tolerance cm3/1000 strokes : +-2.0 Check tolerance cm3/1000s. 4.5 Spreed Tolerance

3.5

5.5

cm3/1000 strokes :

Check tolerance cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 21.03.95 Test oil : ISO 4113

Combination No. : 0400846559

Injection pump

Pump designation : PES6A90D410RS2710

EP type number : 0410896082

Governor

Governer design. : RQV300...1400AB1065

: -9L

Governer no. : 0420212202

Cust. part No. :

Customer-spec. information
Customer : MB-NFZ
Motor : OM 366
Power KW : 92.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40 Tolerance °C : + 2.0

Overflow valve : 1419992198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0681343009

Opening pressure

bar : 173.5 Tolerance bar : + 1.5

Test lines : 1680750015

Outside diameter : 6.0

x inside diameter: 1.5 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 2.30 Tolerance mm : + 0.05

test only : + 0.10

Rack travel in mm : 5.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance $^{\circ}NW$: + 0.75

BASIC SETTING

Rated speed rpm : 1400

Rack travel in mm : 10.35 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 59.5

Tolerance

cm3/1000 strokes : +- 0.5

Check tolerance

cm3/1000s. : \leftarrow 2.5

Spreed

Tolerance cm3/1000 strokes : 3.0	control lever position degree : 111.0
Check tolerance cm3/1000s. : 7.0	tolerance degree : + 4.0
2nd speed rpm : 300	rack travel mm : 9.30 Rated speed rpm : 1445 Tolerance 1/min : +- 5
Rack travel in mm: 8.80 Tolerance mm: + 0.10 Del. quantity cm3/1000 strokes: 12.0	rack travel mm : 4.00 Rated speed rpm : 1555 Tolerance 1/min : +- 15
Tolerance cm3/1000 strokes : +- 2.0	rack travel mm : 0.50
Check tolerance cm3/1000s. : + 4.0 Spreed	Tolerance mm : +- 0.50 Rated speed rpm : 1650
Tolerance + cm3/1000 strokes : 4.5 + Check tolerance + cm3/1000 strokes : 4.5 + cm3/1000 strokes	LOW IDLE
cm3/1000s. : 7.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR	control lever position degree : 75.0 tolerance degree : +- 4.0 Testing:
GUIDE SLEEVE POSITION	Rated speed rpm : 300 rack travel mm : 8.80 Tolerance mm : + 0.10
control lever position degree : -1	Rated speed rpm : 100
Rated speed rpm : 1500 +	CRT mm min. : > 10.30
Rack travel in mm: 16.50 Tolerance mm: + 1.30	CONTINUOUS-ACTION CONTROL
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 655
Rated speed rpm : 1400 + Aneroid pressure +	TORQUE CONTROL
hPa : - + Del. quantity + cm3/1000 strokes : 59.5 +	Rated speed rpm : 1400 rack travel mm : 10.35 Tolerance mm : +- 0.05
Tolerance + 0.5 + Check tolerance +	Rated speed rpm : 500 rack travel mm : 11.40
cm3/1000s. : + 2.5	Tolerance mm : + 0.05
Tolerance + cm3/1000 strokes : 3.0 + Check tolerance +	Rated speed rpm : 750 rack travel mm : 11.10 Tolerance mm : +- 0.10
cm3/1000s. : 7.0	Rated speed rpm : 1100 rack travel mm : 10.40
RATED SPEED	Tolerance mm : +- 0.15
+	

START CUT-OUT	
Rated speed rpm Check	: > 100
speed 1/min	: > 80
Rated speed rpm	
Check	
speed 1/min	: < 240
FUEL DELIVERY CHA	ADACTEDISTICS
LOCE DECIACION CHA	WHELTITOLIED
Aneroid pressure	
hPa	
Rated speed rpm	: 500
Del. quantity	44.0
cm3/1000 strokes	: 46.0
Tolerance	1.5
cm3/1000 strokes	: + 1.5
Check tolerance cm3/1000s.	: +- 3.5
UID/ (UUU).	; 3.3
Aneroid pressure	
hPa	: -
Rated speed rpm	· : 750
Del. quantity	
cm3/1000 strokes	: 49.0
Tolerance	. ,,,,,
cm3/1000 strokes	: +- 1.5
Check tolerance	
cm3/1000s.	: ← 3.5
BREAKAWAY	
BREAKAWAY	
Rack travel in mm	
Rack travel in mm Rated speed rpm	: 1445
Rack travel in mm	: 1445
Rack travel in mm Rated speed rpm	: 1445
Rack travel in mm Rated speed rpm	: 1445 : +- 5
Rack travel in mm Rated speed rpm Tolerance 1/min STARTING FUEL DEL	: 1445 : + 5
Rack travel in mm Rated speed rpm Tolerance 1/min STARTING FUEL DEL Rated speed rpm	: 1445 : + 5 IVERY : 100
Rack travel in mm Rated speed rpm Tolerance 1/min STARTING FUEL DEL Rated speed rpm rack travel mm	: 1445 : + 5 IVERY : 100 : 17.20
Rack travel in mm Rated speed rpm Tolerance 1/min STARTING FUEL DEL Rated speed rpm rack travel mm Tolerance mm	: 1445 : + 5 IVERY : 100
Rack travel in mm Rated speed rpm Tolerance 1/min STARTING FUEL DEL Rated speed rpm rack travel mm Tolerance mm Del. quantity	: 1445 : + 5 IVERY : 100 : 17.20 : + 0.20
Rack travel in mm Rated speed rpm Tolerance 1/min STARTING FUEL DEL Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes	: 1445 : + 5 IVERY : 100 : 17.20
Rack travel in mm Rated speed rpm Tolerance 1/min STARTING FUEL DEL Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance	: 1445 : + 5 IVERY : 100 : 17.20 : + 0.20 : 83.0
Rack travel in mm Rated speed rpm Tolerance 1/min STARTING FUEL DEL Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: 1445 : + 5 IVERY : 100 : 17.20 : + 0.20
Rack travel in mm Rated speed rpm Tolerance 1/min STARTING FUEL DEL Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance	: 1445 : + 5 IVERY : 100 : 17.20 : + 0.20 : 83.0

Rated speed rpm	:	300
rack travel mm	:	8.80
Tolerance mm	: +-	0.10
Del. quantity		
cm3/1000 strokes	:	12.0
Tolerance		
cm3/1000 strokes	: +-	2.0
Check tolerance		
cm3/1000s.	: +-	4.0
Spreed		
Tolerance		
cm3/1000 strokes	•	4.5
Check tolerance		
cm3/1000s.	:	7.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 16.03.95 Test oil : ISO 4113

Combination No. : 0400865027

Injection pump

Pump designation : PES5A80D410/3RS2526

EP type number : 0410885004

Governor

Governer design. : RSV325...900A1C602

: -5L

Governer no. : 0420232605

Cust. part No. : 0423 1362 KY0150-17

Customer-spec. information Customer : KHD

Motor : F5L912 Power KW : 42.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 1419992198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0681343009

Opening pressure

bar : 173.5 Tolerance bar : + 1.5

Test lines : 1680750014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 1.95
Tolerance mm : + 0.05

test only : + 0.10

Rack travel in mm : .50
Tolerance mm : + 1.50

Firing order : 1-3-5-4-2

Phasing : 0-72-144-216-288

Tolerance : + 0.50

Check

tolerance *NW : +- 0.75

BASIC SETTING

Rated speed rpm : 900

Rack travel in mm : 11.40
Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 53.5

Tolerance

cm3/1000 strokes : +- 0.5

Check tolerance

cm3/1000s. : \leftarrow 2.0

Spreed

Tolerance

cm3/1000 strokes : 2.5

	1
Check tolerance	+ control lever
cm3/1000s. : 4.0	position degree : 97.0
	+ tolerance degree : + 4.0
2nd speed rpm : 325	+
	+ rack travel mm : 10.40
Rack travel in mm: 8.70	+ Rated speed rpm : 945
Del. quantity cm3/1000 strokes : 12.0	Tolerance 1/min : + 5
Tolerance	rack travel mm : 4.00
cm3/1000 strokes : +- 1.5	Rated speed rpm : 980
Check tolerance	+ Tolerance 1/min : + 15
cm3/1000s. : +- 3.5	+
Spreed	+ rack travel mm : 0.85
Tolerance	Tolerance mm : + 0.55
cm3/1000 strokes : 4.0 Check tolerance	Rated speed rpm : 1150
cm3/1000s. : 6.0	rack travel mm : 4.00
	Rated speed rpm : 1010
	+
(B) SETTING OF INJECTION PUMP	
WITH GOVERNOR	+ LOW IDLE
	†
	I control lever
GUIDE SLEEVE POSITION	position degree : 73.0
	+ tolerance degree : + 4.0
	+
control lever position degree : - 3	Setting point w/out bumper spring
Rated speed rpm : 800	Rated speed rpm : 325
natural production in the control of	+ rack travel mm : 8.20
Rack travel in mm : 0.50	+
Tolerance mm : + 0.20	+ Testing:
	Dated aread area 205
governor spring pre-tension	Rated speed rpm : 325 + rack travel mm : 8.70
click setting x : 4.00	+ Tolerance mm : + 0.10
	+
	+ rack travel mm : 2.00
FULL LOAD DELIVERY AT FULL LOAD STOP	+ Rated speed rpm : 450
Rated speed rpm : 1130	Tolerance 1/min : + 30
Rated speed rpm : 1130 Aneroid pressure	Rated speed rpm : 100
hPa : -	Traced Speed rpills . Too
Del. quantity	+ CRT mm min. : > 19.50
cm3/1000 strokes : 53.5	+
Tolerance	TOPOUT
cm3/1000 strokes : +- 0.5 Check tolerance	TORQUE CONTROL
cm3/1000s. : +- 2.0	Rated speed rpm : 900
Spreed	+ rack travel mm : 11.40
Tolerance	+ Tolerance mm : + 0.05
cm3/1000 strokes : 2.5	+
Check tolerance	+ Rated speed rpm : 500
cm3/1000s. : 4.0	rack travel mm : 11.45
	Tolerance mm : +- 0.10
RATED SPEED	1
· · · = 2 · · · · · = ==	1

BREAKAWAY

Rack travel in mm : 10.40
Rated speed rpm : 945
Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 115.0

Tolerance

7.5

cm3/1000 strokes : +-Check tolerance

cm3/1000s. : +- 10.0

LOW IDLE

Rated speed rpm 325 8.70 rack travel mm Del. quantity cm3/1000 strokes : 12.0 Tolerance cm3/1000 strokes 1.5 Check tolerance cm3/1000s. 3.5 : +-Spreed Tolerance cm3/1000 strokes : 4.0

Check tolerance cm3/1000S. : 6.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 17.03.95 Edition : ISO 4113 Test oil

Combination No. : 0401846939

Injection pump

Pump designation : PE6P110A320RS3265

EP type number : 0411816778

Governor

Governer design. : RQV300...1050PA232

: -5

: 0421813895 Governer no.

Cust. part No. : 11031123

: -P03 V. 3/94

Customer-spec. information

Customer : VME

: TD102KCE Motor Power KW : 180.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 1417413025

Inlet press. bar : 1.5 Tolerance bar : +-

Test nozzle holde

assembly : 0681343009

Opening pressure

173.5 Tolerance bar 1.5

: 1680750089 Test lines

Outside diameter : 8.0

x inside diameter : 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

26.0 Test pressure bar : Tolerance bar : + 1.0

Prestroke mm 3.05 : + 0.05 Tolerance mm

: + 3.10 test only

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

: 1-5-3-6-2-Firing order

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.30

Check

tolerance °NW : +- 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. :

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm: 12.45

: +- 0.05 Tolerance mm

Del. quantity

cm3/1000 strokes : 158.0

Tolerance cm3/1000 strokes : + 1.0	+ rack travel mm : 11.45 + Rated speed rpm : 1095 + Tolerance 1/min : +- 5
Check tolerance cm3/1000s. : + 3.0	rack travel mm : 4.00 Rated speed rpm : 1200
Spreed	Tolerance 1/min : + 15
Tolerance cm3/1000 strokes : 4.5	rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1300
Check tolerance cm3/1000s. : 7.5	‡ <u> </u>
	+ LOW IDLE
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	control lever position degree : 86.0 tolerance degree : + 4.0
GUIDE SLEEVE POSITION	+ control lever
	position degree : 20.0
control lever	tolerance degree : +- 4.0
position degree : - 1 Rated speed rpm : 1150	Testing:
	Rated speed rpm : 3
Rack travel in mm : 16.50 Tolerance mm : + 1.30	rack travel mm : 4.90 Tolerance mm : + 0.10
Total arte iiiii . The 1.50	Toterative min : 7 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 100
FOLL EDAD DELIVERY AT FOLL LOAD STOP	CRT mm min. :> 6.50
Rated speed rpm : 700 Aneroid pressure	
hPa : 700 Del. quantity	CONTINUOUS-ACTION CONTROL
cm3/1000 strokes : 158.0	Rated speed rpm : 355
Tolerance cm3/1000 strokes : + 1.0	
Check tolerance cm3/1000s. : + 3.0	ANEDOTO (AL TITUDE
Spreed	+ ANEROID/ALTITUDE + COMPENSATOR TEST
Tolerance - cm3/1000 strokes : 4.5	1
Check tolerance	SETTING
cm3/1000s. : 7.5	+
	+ Rated speed rpm : 500 - Pressure hPa : 700
RATED SPEED -	rack travel mm : 12.45
-	Tolerance mm : +- 0.05
control lever	T MEASUREMENT
position degree : 50.0 -	-
tolerance degree : +- 4.0	- Pressure hPa : - Rated speed rpm : 500
control lever	Rated speed rpm : 500 rack travel mm : 10.00
position degree : 117.0	Tolerance mm : +- 0.10
tolerance degree : +- 4.0	Batad around man - E00
	Rated speed rpm : 500

Pressure hPa 340 2.00 rack travel mm Tolerance mm : + 0.10

70 Pressure hPa rack travel mm 0.25 : + 0.05Tolerance mm

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa Rated speed rpm 700 Del. quantity cm3/1000 strokes : 105.0 Tolerance

cm3/1000 strokes : +-1.0 Check tolerance

cm3/1000s. : **←** 4.0

BREAKAWAY

cm3/1000s.

Rack travel in mm : 11.45 Rated speed rpm : 1095 Tolerance 1/min : +

STARTING FUEL DELIVERY

Rated speed rpm 100 : rack travel mm 20.50 : + 0.50 Tolerance mm Del. quantity 175.0 cm3/1000 strokes : Tolerance cm3/1000 strokes : +- 15.0Check tolerance

: + 19.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 16.03.95 Edition Test oil : ISO 4113

Combination No. : 0401846989

Injection pump

Pump designation : PE6P110A320RS3108X

EP type number : 0411816730

Governor

Governer design. : RQV250...1100PA920

: -8

: 0421814104 Governer no.

: 425662 Cust. part No.

: -PO2 RELEASED

Customer-spec. information

Customer : VOLVO-TRUCK

: THD101,102,TD102 Motor

: 197.0 Power KW

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 2417413046

Inlet press. bar : 1.5 Tolerance bar : +- 0.1

Test nozzle holde

: 0681343009 assembly

Opening pressure

173.5 bar Tolerance bar 1.5

Test lines : 1680750089

Outside diameter : 8.0

x inside diameter: 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm 3.05 Tolerance mm : +- 0.05

: + 3.10 test only

Rack travel in mm: 10.50 Tolerance mm : + 1.50

: 1-5-3-6-2-Firing order

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.30

Check

tolerance °NW : + 0.50

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. :

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm: 12.35

Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 166.0

	1	
Tolerance cm3/1000 strokes	: + 1.0	- control lever - position degree : - 1 - Rated speed rpm : 1175
Check tolerance cm3/1000S.	: + 3.0	Rack travel in mm: 16.50 Tolerance mm: + 1.30
Spreed Tolerance cm3/1000 strokes	: 4.0	- FULL LOAD DELIVERY AT FULL LOAD STOP
	. 4.0	•
Check tolerance cm3/1000S.	: 7.5	Rated speed rpm : 700 Aneroid pressure Pa
(B) SETTING OF INJ WITH GOVERNOR	ECTION PUMP	- Del. quantity - cm3/1000 strokes : 166.0 - Tolerance - cm3/1000 strokes : + 1.0
GUIDE SLEEVE TRAVE		Check tolerance : + 3.0 Spreed
Rated speed rpm guide sleeve travel mm	: 250 : 1.19	Tolerance cm3/1000 strokes : 4.0 Check tolerance
Tolerance mm	: + 0.25	cm3/1000s. : 7.5
guide sleeve travel mm	: 1176 : 8.29	RATED SPEED
	: ← 0.25	control lever
Rated speed rpm guide sleeve travel mm	: 1090 : 6.95	position degree : 65.0 tolerance degree : +- 4.0
Tolerance mm	: + 0.25	control lever position degree : 119.0
guide sleeve	: 387 : 2.96	tolerance degree : + 4.0
	: + 0.25	rack travel mm : 11.35 Rated speed rpm : 1165 Tolerance 1/min : +- 5
Rated speed rpm guide sleeve travel mm	: 437 : 3.71	rack travel mm : 4.00 Rated speed rpm : 1240
	+ 0.25	Tolerance 1/min : + 15
Rated speed rpm guide sleeve	520	rack travel mm : 0.50 Tolerance mm : + 0.50
travel mm Tolerance mm	: + 4.67 : + 0.25	Rated speed rpm : 1350
Rated speed rpm :	: 1370	LOW IDLE
travel mm :	11.50 + 0.50 +	control lever position degree : 64.0 tolerance degree : + 4.0
GUIDE SLEEVE POSITI	ON	control lever
	+	position degree : 12.0

tolerance degree : +- 4.0

Testing:

Rated speed rpm : 250 rack travel mm : 5.30 Tolerance mm : + 0.10

Rated speed rpm : 150

CRT mm min. :> 6.30

CONTINUOUS-ACTION CONTROL

Rated speed rpm : 330

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1000
rack travel mm : 12.35
Tolerance mm : + 0.05

MEASUREMENT

Pressure hPa : Rated speed rpm : 500
rack travel mm : 9.50
Tolerance mm : + 0.15

Rated speed rpm : 500

Pressure hPa : 740
rack travel mm : 2.50
Tolerance mm : + 0.15

Pressure hPa : 250 rack travel mm : 0.25 Tolerance mm : + 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : Rated speed rpm : 700
Del. quantity

cm3/1000 strokes : 114.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : +- 4.0

BREAKAWAY

Rack travel in mm : 11.35
Rated speed rpm : 1165
Tolerance 1/min : + 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 9.50 Tolerance mm : + 0.15

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 22.03.95 Edition Test oil : ISO 4113

Combination No. : 0402046829

Injection pump

Pump designation : PES6P120A320RS3284

EP type number : 0412026749

Governor

Governer design. : RQV275...1050PA995

: -1

: 0421813941 Governer no.

Cust, part No. : CCEP 5120A 66-177

Customer-spec. information

: RVI Customer

: MIDRO6.20.45 B/3 Motor

Power KW : 195.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C 40 Tolerance *C 2.0

Overflow valve : 2417413071

Inlet press. bar : 2.5

Test nozzle holde

: 1688901105 assembly

Opening pressure

208.5 bar Tolerance bar

Lube oil : 1409918004

Test lines : 1680750089 Outside diameter : 8.0

x inside diameter : 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar $: \leftarrow 1.0$

Prestroke mm 3.55 : + 0.05 Tolerance mm

test only : + 3.10

Rack travel in mm: 10.50 : +- 1.50 Tolerance mm

: 1-5-3-6-2-Firing order

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.30

Check

tolerance "NW : + 0.50

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. :

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm: 10.70 : + 0.05 Tolerance mm

Del. quantity

cm3/1000 strokes : 157.0

1	Talanana
Tolerance cm3/1000 strokes : + 1.0	Tolerance cm3/1000 strokes : 5.0 Check tolerance
Check tolerance	cm3/1000s. : 9.0
Special	RATED SPEED
Spreed Tolerance cm3/1000 strokes : 5.0	control lever position degree : 300.0
Check tolerance cm3/1000s. : 9.0	tolerance degree : + 4.0
2nd speed rpm : 275	rack travel mm : -1.00 Rated speed rpm : 1125
Rack travel in mm: -5.20	Tolerance 1/min : +- 5
Tolerance mm : +- 0.20	rack travel mm : -6.70
Del. quantity + cm3/1000 strokes : 25.0 + Tolerance +	Rated speed rpm : 1220 Tolerance 1/min : + 15
cm3/1000 strokes : +- 2.0	rack travel mm : -10.20
Check tolerance + 5.0 +	Tolerance mm : + 0.55
cm3/1000s. : +- 5.0 +- 5.0	Rated speed rpm : 1350
Tolerance	
cm3/1000 strokes : 8.0 + Check tolerance	LOW IDLE
cm3/1000s. : 12.0	
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	control lever position degree : 247.0 tolerance degree : + 4.0
#	Testing:
GUIDE SLEEVE POSITION	Rated speed rpm : 275 rack travel mm : -5.20 Tolerance mm : + 0.10
control lever position degree : -1 Rated speed rpm : 1220	Rated speed rpm : 200 CRT mm max. : < -3.60
Rated Speed (Mil.: 1220 +	CR1 ((KI) ((1)4X. : < -3.60
Rack travel in mm : 10.50 + Tolerance mm : + 1.30 +	CONTINUOUS-ACTION CONTROL
	Rated speed rpm : 390
FULL LOAD DELIVERY AT FULL LOAD STOP	
Rated speed rpm : 700 Aneroid pressure	TORQUE CONTROL
hPa : 1000 - Del. quantity	Rated speed rpm : 1050 Tolerance mm : + 0.10
cm3/1000 strokes : 157.0	
cm3/1000 strokes : + 1.0 +	ANEROID/ALTITUDE
Check tolerance cm3/1000s. : +- 4.0	COMPENSATOR TEST
Spreed	
+	SETTING

Rated speed rpm Pressure hPa	: 500 : 1000	† 1
MEASUREMENT	. 1000	I -
		ļ °
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: -1.35	+ D C
Rated speed rpm	: 500	7 6
Pressure hPa rack travel mm Tolerance mm	: 130 : -1.00 : + 0.10	- -
Pressure hPa	: 240	+ 4
rack travel mm	: -0.35	Į R
Tolerance mm	: ← 0.05	+ r
		_ + 7
START CUT-OUT		- † D
		+ T
Rated speed rpm Check		+ c
speed 1/min	: > 80	+ ci
Rated speed rpm Check	: < 210	+ S
speed 1/min	: < 230	Į ci
		+ c
FUEL DELIVERY CHA	DACTEDICTICS	- + c
LOST AFFIASKI CUL	INACTERISTICS	I
Aneroid pressure		+
hPa	: 1000	+
Rated speed rpm Del. quantity	: 1050	Ī
cm3/1000 strokes Tolerance	: 155.0	$\frac{1}{1}$
cm3/1000 strokes	: + 3.0	1
Check tolerance		+
cm3/1000s.	: ← 6.0	İ
Aneroid pressure		Į
hPa	: -	+
Rated speed rpm	: 500	+
Del. quantity cm3/1000 strokes	: 108.0	1
Tolerance	. 100.0	I
cm3/1000 strokes	: + 1.0	1
Check tolerance		+
cm3/1000s.	: +- 4.0	‡
		- +
BREAKAWAY		†
		Į
Daal Anaval da	4 00	1

lerance 1/min : + 5 ARTING FUEL DELIVERY . quantity 3/1000 strokes : 175.0 erance 3/1000 strokes : + 15.0 ck tolerance 71000s. : +- 19.0 IDLE ced speed rpm : 275 ck travel mm : -5.20 erance mm : **+** 0.20 . quantity 3/1000 strokes : 25.0 erance 3/1000 strokes : +- 2.0 ck tolerance /1000s. : +- 5.0 eed erance /1000 strokes : 8.0 ck tolerance /1000s. 12.0

Rack travel in mm: -1.00 Rated speed rpm: 1125

Note remarks

Refer to Service Info for test and adjustment instructions.

See microcard(s) W400/...

Edition : 17.03.95 Test oil : ISO 4113

Combination No. : 0402640828

Injection pump

Pump designation : PE12P12OA52OLS7826

EP type number : 0412620817

Governor

Governer design. : RQV350...1050PA870

: -13

Governer no. : 0421813934

Cust. part No. :

Customer-spec. information

Customer : MB-NFZ Motor : OM 444 LA

Power KW : 620.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1417413025

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Overflow quantity

min. L/h : 160 Tolerance L/h : +- 10.0

Test nozzle holde

assembly : 1688901019

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1680750075

Outside diameter : 8.0

x inside diameter: 3.0

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.45
Tolerance mm : + 3.05

test only $: \leftarrow 0.10$

Rack travel in mm : 20.00 Tolerance mm : +- 1.00

Firing order : 12-1-5-9-8

: - 3- 4- 11- 10 : - 2- 6- 7

Phasing : 0-45-60-105-120

: -165-180-225-240 : -285-300-345

Tolerance : + 0.30

Check

tolerance °NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 12

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm: 14.05

B19

Tolerance mm : + 0.05 +	Check tolerance
+	cm3/1000s. : +- 4.0
Del. quantity cm3/1000 strokes : 275.0	Spreed Tolerance cm3/1000 strokes : 6.0
Tolerance	Check tolerance
cm3/1000 strokes : +- 1.0 +	cm3/1000s. : 10.0
Check tolerance cm3/1000s. : +- 4.0	RATED SPEED .
Spreed	
Tolerance cm3/1000 strokes : 6.0	<pre>control lever position degree : 118.0 tolerance degree : + 4.0</pre>
Check tolerance : 10.0 +	rack travel mm : 13.00
2nd speed rpm : 350	Rated speed rpm : 1095 Tolerance 1/min : + 5
Rack travel in mm: 5.60	rack travel mm : 4.00
Tolerance mm : + 0.30 + Del. quantity +	Rated speed rpm : 1185 Tolerance 1/min : + 15
cm3/1000 strokes : 19.0	
Tolerance + cm3/1000 strokes : ← 3.0 +	rack travel mm : 0.50 Tolerance mm : +- 0.50
Check tolerance	Rated speed rpm : 1 0
cm3/1000s. : + 6.0 +	
Tolerance + cm3/1000 strokes : 8.0 +	LOW IDLE
Check tolerance	
cm3/1000s. : 12.0	control lever position degree : 63.0
Ţ.	tolerance degree : + 4.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Testing:
Ţ	Rated speed rpm : 350
GUIDE SLEEVE POSITION	rack travel mm : 5.60 Tolerance mm : +- 0.10
†	
control lever	Rated speed rpm : 250
position degree : -1 Rated speed rpm : 1150	CRT mm min. : > 7.30
Rack travel in mm: 16.50 Tolerance mm: + 1.30	CONTINUOUS-ACTION CONTROL
<u></u>	Rated speed rpm : 475
FULL LOAD DELIVERY AT FULL LOAD STOP	TOPOLIE CANTROL
Rated speed rpm : 1050	TORQUE CONTROL
Aneroid pressure hPa : 1800	Rated speed rpm : 1050
Del. quantity	rack travel mm : 14.05 Tolerance mm : +- 0.05
cm3/1000 strokes : 275.0	Rated speed rpm : 750
cm3/1000 strokes : + 1.0 +	rack travel mm : 14.05

Tolerance mm	: + 0.05	Tolerance cm3/1000 strokes Check tolerance	
ANEROID/ALTITUDE COMPENSATOR TEST		cm3/1000s.	: 15.0
MEASUREMENT		BREAKAWAY	
		+ Rack travel in m	
Pressure hPa Rated speed rpm	500	Rated speed rpm Tolerance 1/min	
Pressure hPa	: 300	+	
rack travel mm Tolerance mm	: 1.45 : + 0.05	STARTING FUEL DE	_IVERY
Pressure hPa	: 900	Rated speed rpm	: 100
rack travel mm	: 4.85	+ Del. quantity	710.0
Tolerance mm	: + 0.15	+ cm3/1000 strokes + Tolerance	: 340.0
		cm3/1000 strokes	: + 10.0
START CUT-OUT		+ Check tolerance	
Rated speed rpm	: > 200	- cm3/1000s.	: +- 14.0
Check	. 400	+	
speed 1/min	: > 180 : < 310	†	
Rated speed rpm Check	: < 310	LOW IDLE	
speed 1/min	: < 330	+	
•		+ Rated speed rpm	: 350
FUEL DELIVERY CHA	DACTEDISTICS	† rack travel mm † Tolerance mm	: 5.60 : + 0.30
LOEF NETTAEKI CUN	ARACTERISTICS	Del. quantity	. +- 0.50
Aneroid pressure		+ cm3/1000 strokes	: 19.0
hPa	: 1800	Tolerance	
Rated speed rpm Del. quantity	: 750	+ cm3/1000 strokes + Check tolerance	: ← 3.0
cm3/1000 strokes	: 272.0	cm3/1000s.	: +- 6.0
Tolerance		Spreed	
cm3/1000 strokes	: 3.0	+ Tolerance	
Check tolerance cm3/1000s.	: +- 6.0	+ cm3/1000 strokes Check tolerance	: 8.0
Spreed	, 1 0.0	+ cm3/1000s.	: 12.0
Tolerance		+	
cm3/1000 strokes	: 10.0	†	
Check tolerance cm3/1000s.	: 15.0	‡	
A		+	
Aneroid pressure hPa	•	İ	
Rated speed rpm	500	Ī	
Del. quantity		+	
cm3/1000 strokes	: 125.0	†	
Tolerance cm3/1000 strokes	: ← 1.0	1	
Check tolerance		Ŧ	
cm3/1000s. Spreed	: +- 4.0	‡	
•		+	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 22.03.95 Edition Test oil : ISO 4113

Combination No. : 0402640844

Injection pump

Pump designation : PE12P12OA52OLS7879

EP type number : 0412620841

Governor

Governer design. : RQV350...1200PA1167

Governer no. : 0421814107

Cust. part No. : 0250742402

Customer-spec. information

: MTU Customer

: 12V183-03 Motor

Power KW : 845.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 1417413025

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Overflow quantity

min. L/h : 150 Tolerance L/h : + 10.0

Test nozzle holde

: 1688901105 assembly

Opening pressure

bar 208.5 Tolerance bar : **+** 1.5

Lube oil : 1409918004 Test lines : 1680750075

Outside diameter : 8.0

x inside diameter : 3.0

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +- 1.0

Prestroke mm : ..05
Tolerance mm : + 0.05

test only : \leftarrow 0.10

Rack travel in mm: 10.50 Tolerance mm : +- 0.50

: 12- 1- 5- 9- 8 : - 3- 4- 11- 10 : - 2- 6- 7 Firing order

: 0-45-60-105-120 Phasing

> : -165-180-225-240 : -285-300-345

Tolerance : + 0.30

Check

tolerance $^{\circ}NW$: + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 12

BASIC SETTING

Rated speed rpm : 1200

		1
Deal Assist to a	. 40.00	† guide sleeve
Rack travel in m		travel mm : 2.86
Tolerance mm	: +- 0.10	+ Tolerance mm : +- 0.25
Del. quantity		Poted and an
cm3/1000 strokes	. 310.0	+ Rated speed rpm : 470
CIID/ (DOU STrokes	: 310.0	+ guide sleeve
Talananan		+ travel mm : 3.42
Tolerance cm3/1000 strokes		+ Tolerance mm : + 0.25
CIBY TOOU STPOKES	: + 1.0	T
Chaol, Aslanius		Rated speed rpm : 620
Check tolerance		guide steeve
cm3/1000s.	: +- 4.0	+ travel mm : 3.89
Connect		Tolerance mm : + 0.25
Spreed		†
Tolerance		+ Rated speed rpm : 1366
cm3/1000 strokes	: 8.0	+ guide sleeve
		travel mm : 10.00
Check tolerance	40.0	† Tolerance mm : + 0.25
cm3/1000s.	: 12.0	†
	The state of the s	+ Rated speed rpm : 1470
2nd speed rpm	: 350	+ guide sleeve
		† travel mm : 11.50
Rack travel in m		+ Tolerance mm : +- 0.50
Tolerance mm	: +- 0.30	†
Del. quantity		
cm3/1000 strokes	: 20.0	+ GUIDE SLEEVE POSITION
Tolerance		†
cm3/1000 strokes	: + 3.0	+
Check tolerance		+ control lever
cm3/1000s.	: ← 6.0	+ position degree : - 1
Spreed		+ Rated speed rpm : 1310
Tolerance		+
cm3/1000 strokes	: 10.0	† Rack travel in mm : 12.00
Check tolerance		+ Tolerance mm : +- 1.30
cm3/1000s.	: 15.0	+
		FULL LOAD DELIVERY AT FULL LOAD STOP
(B) SETTING OF IN	JECTION PUMP	+
WITH GOVERNOR		+ Rated speed rpm : 1200
		Amanadal maaanuus
		+ Aneroid pressure
		+ hPa : 2000
GUIDE SLEEVE TRAV	'EL	+ hPa : 2000 + Del. quantity
		+ hPa : 2000 + Del. quantity + cm3/1000 strokes : 310.0
Rated speed rpm	EL : 350	hPa : 2000 Del. quantity cm3/1000 strokes : 310.0 Tolerance
Rated speed rpm guide sleeve	: 350	hPa : 2000 Del. quantity cm3/1000 strokes : 310.0 Tolerance cm3/1000 strokes : + 1.0
Rated speed rpm guide sleeve travel mm	: 350 : 1.53	hPa : 2000 Del. quantity cm3/1000 strokes : 310.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance
Rated speed rpm guide sleeve	: 350	hPa : 2000 Del. quantity cm3/1000 strokes : 310.0 Tolerance cm3/1000 strokes : + 1.0
Rated speed rpm guide sleeve travel mm	: 350 : 1.53 : + 0.15	hPa : 2000 Del. quantity cm3/1000 strokes : 310.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed
Rated speed rpm guide sleeve travel mm Tolerance mm	: 350 : 1.53	hPa : 2000 Del. quantity cm3/1000 strokes : 310.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance
Rated speed rpm guide sleeve travel mm Tolerance mm	: 350 : 1.53 : + 0.15 : 1281	hPa : 2000 Del. quantity cm3/1000 strokes : 310.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 8.0
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm	: 350 : 1.53 : + 0.15 : 1281 : 8.53	hPa : 2000 Del. quantity cm3/1000 strokes : 310.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	: 350 : 1.53 : + 0.15 : 1281	hPa : 2000 Del. quantity cm3/1000 strokes : 310.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 8.0
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 350 : 1.53 : + 0.15 : 1281 : 8.53 : + 0.20	hPa : 2000 Del. quantity cm3/1000 strokes : 310.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm	: 350 : 1.53 : + 0.15 : 1281 : 8.53	hPa : 2000 Del. quantity cm3/1000 strokes : 310.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 350 : 1.53 : + 0.15 : 1281 : 8.53 : + 0.20 : 990	hPa : 2000 Del. quantity cm3/1000 strokes : 310.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm	: 350 : 1.53 : + 0.15 : 1281 : 8.53 : + 0.20 : 990 : 5.68	hPa : 2000 Del. quantity cm3/1000 strokes : 310.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	: 350 : 1.53 : + 0.15 : 1281 : 8.53 : + 0.20 : 990	hPa : 2000 Del. quantity cm3/1000 strokes : 310.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm	: 350 : 1.53 : + 0.15 : 1281 : 8.53 : + 0.20 : 990 : 5.68	hPa : 2000 Del. quantity cm3/1000 strokes : 310.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm	: 350 : 1.53 : + 0.15 : 1281 : 8.53 : + 0.20 : 990 : 5.68	hPa : 2000 Del. quantity cm3/1000 strokes : 310.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 RATED SPEED
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Tolerance mm	: 350 : 1.53 : + 0.15 : 1281 : 8.53 : + 0.20 : 990 : 5.68 : + 0.25	hPa : 2000 Del. quantity cm3/1000 strokes : 310.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 RATED SPEED

		+		
rack travel mm	: 11.80	1	Pressure hPa	: -
rack travel mm Rated speed rpm Tolerance 1/min	: 1245	1	Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: 600
Tolerance 1/min	: +- 5	1	rack travel mm	5.90
		1	Tolerance mm	: +- 0.15
rack travel mm Rated speed rpm	: 4.00	1		
Rated speed rom	: 1330	1	Rated speed rpm	: 600
Tolerance 1/min	: +- 15	1	The second of th	
	,,,	1	Pressure hPa	: 400
rack travel mm	: 0.75	1	rack travel mm	
Tolerance mm	: +- 0.75	1	rack travel mm Tolerance mm	: ← 0.05
rack travel mm Tolerance mm Rated speed rpm	: 1470	1		0.00
		1	Pressure hPa	: 250
			Pressure hPa rack travel mm Tolerance mm	6.80
LOW IDLE		1	Tolerance mm	: + 0.10
		+		
		1	Pressure hPa rack travel mm Tolerance mm	: 1600
control lever		1	rack travel mm	: 12.00
position degree	: 68.0	1	Tolerance mm	: +- 0.05
tolerance degree		+		
		+	Pressure hPa rack travel mm Tolerance mm	: 1200
Testing:		1	rack travel mm	: 10.45
•		1	Tolerance mm	: + 0.10
Rated speed rpm	: 350	1		30.0
rack travel mm Tolerance mm	: 4.00	+ 1		
Tolerance mm	: +- 0.10	1	START CUT-OUT	
		+		
Rated speed rpm	: 250	1	Rated speed rpm	: > 240
		+	Check	
CRT mm min.	: > 6.30	+ :	speed 1/min	: > 220
		+	Rated speed rpm	: < 270
			Check	
CONTINUOUS-ACTION	CONTROL	+ :	speed 1/min	: < 290
		+		
Rated speed rpm	: 450	+ ·		
		+	FUEL DELIVERY CHA	RACTERISTICS
TORQUE CONTROL			Aneroid pressure	
	4000		hPa	: 800
Rated speed rpm			Rated speed rpm	: 600
rack travel mm	: 12.80		Del. quantity	
Tolerance mm	: +- 0.10		cm3/1000 strokes	: 253.0
	400		Tolerance	
Rated speed rpm	: 600		cm3/1000 strokes	: ← 1.5
rack travel mm Tolerance mm	: 9.50		Check tolerance	
iolerance mm	: +- 0.10	† '	cm3/1000s.	: +- 4.5
		†	A	
ANCHOTO /AL TITUE			Aneroid pressure	
ANEROID/ALTITUDE			hPa	500
COMPENSATOR TEST			Rated speed rpm	: 500
			Del. quantity	. 124 0
CETTING		,	cm3/1000 strokes	: 121.0
SETTING			Tolerance	10
Dotted appeal and	: 600		cm3/1000 strokes	; ***
Rated speed rpm			Check tolerance cm3/1000s.	/. 0
Pressure hPa			Spreed	: +- 4.0
rack travel mm Tolerance mm	: +- 0.10		opreed Folerance	
TOTALICE UNI	. += 0.10		cm3/1000 strokes	: 10.0
MEASUREMENT		Ţ,	שווטי וטטט סנוטגעצ	. (0.0
HEMOUNEMENT		Т		

Check tolerance

cm3/1000s. : 15.0

BREAKAWAY

Rack travel in mm : 11.80 Rated speed rpm : 1245 Tolerance 1/min

STARTING FUEL DELIVERY

Rated speed rpm 100

Del. quantity cm3/1000 strokes : 360.0

Tolerance

cm3/1000 strokes : +- 15.0

Check tolerance

cm3/1000s. : +- 19.0

LOW IDLE

Rated speed rpm 350 4.00 rack travel mm

0.30 Tolerance mm

Del. quantity cm3/1000 strokes : 20.0

Tolerance

cm3/1000 strokes : +-3.0

Check tolerance

cm3/1000s. 6.0 Spreed

Tolerance

cm3/1000 strokes : 10.0

Check tolerance

cm3/1000s. 15.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 21.02.95 : ISO 4113

Combination No. : 0402646625

Injection pump

Pump designation : PE6P120A320RS7300

EP type number : 0412626886

Governor

Governer design. : RQV275...1000PA1077K

Governer no. : 0421815358

Cust. part No. : 1280165

Customer-spec. information

Customer : DAF

: WS 242 M Motor Power KW : 242.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C

40 Tolerance °C 2.0

Overflow valve : 1417413025

Inlet press. bar : 1.5 Tolerance bar : +- 0.1

Overflow quantity

min. l/h : 140 Tolerance l/h : + 10.0

Test nozzle holde

: 1688901105 assembly

Opening pressure

208.5 bar 1.5 Tolerance bar

Test lines : 1680750089

Outside diameter : 8.0

x inside diameter: 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm 5.35 Tolerance mm : +- 0.05

test only : + 0.10

Rack travel in mm: 15.00 Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.30

Check

: **←** 0.75 tolerance °NW

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 1

BASIC SETTING

Rated speed rpm : 980

Rack travel in mm: 15.05

: **←** 0.05 Tolerance mm

Del. quantity	+ guide sleeve
cm3/1000 strokes : 228.0	+ travel mm : 3.08
	+ Tolerance mm : +- 0.25
Talanana	Toterance inii : Toterance inii
Tolerance	†
cm3/1000 strokes : +- 1.0	+ Rated speed rpm : 400
	+ guide sleeve
Check tolerance	+ travel mm : 3.92
cm3/1000s. : +- 4.0	Tolonous me
CM3/10003. : +- 4.0	Tolerance mm : +- 0.25
	+
Spreed	+ Rated speed rpm : 1310
Tolerance	+ guide sleeve
cm3/1000 strokes : 5.0	+ travel mm : 13.50
CHOT TODO SETORES . J.U	Travel likit
	† Tolerance mm : + 0.50
Check tolerance	+
cm3/1000s. : 9.0	
	+ GUIDE SLEEVE POSITION
2nd speed rpm : 275	GOIDE GEEFAE 1 GOITTON
2nd speed rpm : 275	Ť
	†
Rack travel in mm : 6.20	+ control lever
Tolerance mm : +- 0.10	<pre> position degree : − 1 </pre>
Del. quantity	+ Rated speed rpm : 1140
	T raced speed (pill . 1140
	†
Tolerance	+ Rack travel in mm : 14.00
cm3/1000 strokes : +- 3.0	+ Tolerance mm : + 1.30
Check tolerance	
cm3/1000s. : + 6.0	
	FIRE LOAD DELIVERY AT F. 1 LOAD CTOR
Spreed	FULL LOAD DELIVERY AT F _L LOAD STOP
Tolerance	+
cm3/1000 strokes : 8.0	+ Rated speed rpm : 980
Check tolerance	+ Aneroid pressure
	hPa : -
cm3/1000s. : 12.0	
	+ Del. quantity
	+ cm3/1000 strokes : 228.0
(B) SETTING OF INJECTION PUMP	+ Tolerance
WITH GOVERNOR	+ cm3/1000 strokes : + 1.0
WITH GOVERNOON	Check tolerance
	+ cm3/1000s. : +- 4.0
GUIDE SLEEVE TRAVEL	+ Spreed
	+ Tolerance
Rated speed rpm : 275	- cm3/1000 strokes : 5.0
guide sleeve	+ Check tolerance
travel mm : 2.14	+ cm3/1000s. : 9.0
Tolerance mm : + 0.20	+
Rated speed rpm : 1045	RATED SPEED
guide sleeve	101120 01220
	T
travel mm : 9.83	†
Tolerance mm : +- 0.15	+ control lever
	+ position degree : 119.0
Rated speed rpm : 689	+ tolerance degree : + 4.0
guide sleeve	1
	nock thought and all on
travel mm : 6.43	+ rack travel mm : 14.00
Tolerance mm : + 0.25	+ Rated speed rpm : 1037
	+ Tolerance 1/min : + 8
Rated speed rpm : 284	
guide sleeve	rack travel mm : 4.00
travel mm : 2.27	+ Rated speed rpm : 1165
Tolerance mm : + 0.25	+ Tolerance 1/min : +- 15
	+
Rated speed rpm : 334	+ rack travel mm : 0.70
and the second of the second o	· · · · · · · · · · · · · · · · · · ·

Tolerance mm Rated speed rpm	: +- 0.70 : 1250	†	MEASUREMENT	
	1 1230	1	Pressure hPa	: -
····		 }	Rated speed rpm	: 980
LOW IDLE		+	rack travel mm	: 12.30
		+	Tolerance mm	: +- 0.10
control lever		1	Rated speed rpm	; 980
position degree	: 75.0	1	natea speca i piir	. 700
tolerance degree	: +- 4.0	+	Pressure hPa	
		+	rack travel mm	
Testing:		1	Tolerance mm	: ← 0.05
Rated speed rpm		Ţ	Pressure hPa	: 270
rack travel mm	: 5.30	+	rack travel mm	: 12.90
Tolerance mm	: ← 0.10	+	Tolerance mm	: + 0.10
rack travel mm	: 2.00	†		
Rated speed rpm		I		
Tolerance 1/min		I	FUEL DELIVERY CHA	RACTERISTICS
		+		WHO I CHILD ! TOO
Rated speed rpm	: 175	†	Aneroid pressure	
CRT mm min.	: > 8.50	1	hPa Rated speed rpm	750
OICE HAN INTELL	. > 0.00	I	Del. quantity	. 730
			cm3/1000 strokes	: 238.0
TORQUE CONTROL		+	Tolerance	
		+	cm3/1000 strokes	: + 2.0
Rated speed rpm	: 980	+	Check tolerance	_
rack travel mm	: 15.05	+	cm3/1000s.	: +- 5.0
Tolerance mm	: + 0.05	†	Spreed	
Rated speed rpm	. 850	I	Tolerance cm3/1000 strokes	: 8.0
rack travel mm	: 14.95	I	Check tolerance	. 0.0
Tolerance mm		1	cm3/1000s.	: 12.0
		+		
Rated speed rpm	: 750	+	Aneroid pressure	
rack travel mm	: 14.95	†	hPa	
Tolerance mm	: +- 0.05	1	Rated speed rpm Del. quantity	: 600
Rated speed rpm	: 600	I	cm3/1000 strokes	: 157.0
rack travel mm	: 14.60	Ţ	Tolerance	. 151.0
Tolerance mm	: + 0.10	1	cm3/1000 strokes	: +- 1.0
		+	Check tolerance	
Rated speed rpm	: 500	+	cm3/1000s.	: ← 4.0
rack travel mm	: 14.40	†		
Tolerance mm	: +- 0.10	1	BREAKAWAY	
		I	OI/EUI/UMV I	
ANEROID/ALTITUDE		+		
COMPENSATOR TEST		+	Rack travel in mm	
		†	Rated speed rpm	
SETTING		Ť	Tolerance 1/min	: + 8
OCI ITINO		I		
Rated speed rpm	: 980	1		
Pressure hPa	: 1500	+		
rack travel mm	: 15.05	+		
Toterance mm	: +- 0.05	+		·

Pressure hPa Rated speed rpm rack travel mm Tolerance mm	:	- 980 12.30 - 0.10
Rated speed rpm	:	980

LIVERY CHARACTERISTICS

Aneroid pressure		
hPa	:	-
Rated speed rpm	:	750
Del. quantity		
cm3/1000 strokes	:	238.0
Tolerance		
cm3/1000 strokes	: +	- 2.0
Check tolerance		
cm3/1000s.	: +	- 5.0
Spreed		
Tolerance		
cm3/1000 strokes	:	8.0
Check tolerance		
cm3/1000s.	:	12.0
Aneroid pressure		
hPa	:	_
Rated speed rpm		600
Del. quantity	-	
cm3/1000 strokes	:	157.0
	•	

AY

LOW IDLE

Rated speed rpm	:	275
rack travel mm	:	6.20
Tolerance mm	: +-	0.10
Del. quantity		
cm3/1000 strokes	:	17.0
Tolerance		
cm3/1000 strokes	: +-	3.0
Check tolerance		
cm3/1000s.	: +-	6.0
Spreed		
Tolerance		
cm3/1000 strokes	:	8.0
Check tolerance		
cm3/1000s.	:	12.0

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 17.03.95 Test oil : ISO 4113

Combination No. : 0402646655

Injection pump

Pump designation : PE6P120A320RS7361

EP type number : 0412626939

Governor

Governer design. : RQV275...1150PA1192K

Governer no. : 0421815452

Cust. part No. : 1304201/0

Customer-spec. information

Customer : DAF

Motor : RS/GS 245 M

Power KW : 245.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40 Tolerance °C : + 2.0

Overflow valve : 1417413000

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Overflow quantity

min. L/h : 140 Tolerance L/h : + 10.0

Test nozzle holde

assembly : 1688901105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Lube oil : 1409918004

Test lines : 1680750089

Outside diameter : 8.0

x inside diameter: 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.85
Tolerance mm : + 0.05

test only : + 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300 Tolerance : + 0.30

Check

tolerance °NW : +- 0.50

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : '

*NW after s.o.d. : 0.3

BASIC SETTING

Rated speed rpm : 1130

.

Pools through the man at 17.50	guide sleeve
Rack travel in mm: 14.50	+ travel mm : 2.13
Tolerance mm : +- 0.05	+ Tolerance mm : + 0.25
Dol months.	750
Del, quantity	+ Rated speed rpm : 350
cm3/1000 strokes : 239.0	+ guide sleeve
	+ travel mm : 2.97
Tolerance	† Tolerance mm : + 0.25
$cm3/1000$ strokes : \leftarrow 1.0	†
	+ Rated speed rpm : 460
Check tolerance	+ guide sleeve
cm3/1000s. : +- 4.0	+ travel mm : 3.90
Day and	Tolerance mm : +- 0.25
Spreed	†
Tolerance	+ Rated speed rpm : 1480
cm3/1000 strokes : 5.0	+ guide sleeve
Ohard Arthuran	travel mm : 13.50
Check tolerance	+ Tolerance mm : + 0.50
cm3/1000s. : 9.0	†
3 L	
2nd speed rpm : 275	+ GUIDE SLEEVE POSITION
Bart Annual to an a 5 36	†
Rack travel in mm: 5.70	†
Tolerance mm : + 0.20	t control lever
Del. quantity	+ position degree : - 1
cm3/1000 strokes : 13.0	+ Rated speed rpm : 1275
Tolerance	†
cm3/1000 strokes : + 3.0	Rack travel in mm: 13.50
Check tolerance	Tolerance mm : + 1.30
$cm3/1000s.$: \leftarrow 6.0	†
Spreed	
Tolerance	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes : 8.0	† D
Check tolerance	Rated speed rpm : 1130
cm3/1000s. : 12.0	Aneroid pressure
•	hPa : 1500
(D) OFTITUO OF THIS OTTON DIMED	Del. quantity
(B) SETTING OF INJECTION PUMP	cm3/1000 strokes : 239.0
WITH GOVERNOR -	Tolerance
•	cm3/1000 strokes : +- 1.0
CUTAR OF FINE TRAVEL	Check tolerance
GUIDE SLEEVE TRAVEL	cm3/1000s. : +- 4.0
Rated speed rpm : 275	+ Spreed + Tolerance
	tocerance cm3/1000 strokes : 5.0
guide sleeve - travel mm : 1.56 -	+ Check tolerance
Tolerance mm : +- 0.20	
roterance imi	+ cm3/1000s. : 9.0
Rated speed rpm : 1223	
guide sleeve	RATED SPEED
travel mm : 10.29	RATED SPEED
Tolerance mm : +- 0.15	
Total alice likil . To U. 13	control lever
Rated speed rpm : 822 -	100.0
Rated speed rpm : 822 - guide sleeve -	tolerance degree : 120.0 tolerance degree : +- 4.0
travel mm : 6.85	L coterante degree : T 4.0
Tolerance mm : +- 0.25	rack travel mm : 13.50
TOLET GIVE WHILE . TO U.CO	
Rated speed rpm : 300	+ Rated speed rpm : 1207 + Tolerance 1/min : +- 5
Rated speed rpm : 300	L Total ance Triming 1. The S
٦	r

rack travel mm : 4.00 Rated speed rpm : 1340 Tolerance 1/min : + 15 rack travel mm : 0.70 Tolerance mm : + 0.70 Rated speed rpm : 1450	Rated speed rpm : 1130 Pressure hPa : 1500 rack travel mm : 14.50 Tolerance mm : + 0.05 MEASUREMENT
LOW IDLE	Pressure hPa : - Rated speed rpm : 1130 rack travel mm : 9.20 Tolerance mm : +- 0.20
control lever position degree : 71.0 tolerance degree : +- 4.0 Testing:	Rated speed rpm : 1130 Pressure hPa : 740 rack travel mm : 13.05 Tolerance mm : + 0.05
Rated speed rpm : 275 rack travel mm : 5.70 Tolerance mm : + 0.10 Rated speed rpm : 175	Pressure hPa : 320 rack travel mm : 10.00 Tolerance mm : + 0.10
CRT mm min. :> 8.00	FUEL DELIVERY CHARACTERISTICS
CONTINUOUS-ACTION CONTROL Rated speed rpm : 375 TORQUE CONTROL Rated speed rpm : 1130 rack travel mm : 14.50 Tolerance mm : + 0.05	Aneroid pressure hPa : 1500 Rated speed rpm : 850 Del. quantity cm3/1000 strokes : 256.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 5.0 Spreed
Rated speed rpm : 1025 rack travel mm : 14.50 Tolerance mm : + 0.10	Tolerance cm3/1000 strokes: 8.0 Check tolerance cm3/1000s.: 12.0
Rated speed rpm : 850 rack travel mm : 14.20 Tolerance mm : + 0.10	Aneroid pressure hPa : - Rated speed rpm : 600 Del. quantity
Rated speed rpm : 650 rack travel mm : 13.20 Tolerance mm : + 0.10 Rated speed rpm : 500 rack travel mm : 12.85	cm3/1000 strokes : 154.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0
ANEROID/ALTITUDE COMPENSATOR TEST	BREAKAWAY Rack travel in mm : 13.50
	+ Rated speed rpm : 1207 + Tolerance 1/min : +- 5

SETTING

LOW IDLE

Rated speed rpm	:		275
rack travel mm	:		5.70
Tolerance mm	:	+-	0.20
Del. quantity			
cm3/1000 strokes	:		13.0
Tolerance			
cm3/1000 strokes	:	+-	3.0
Check tolerance			
cm3/1000s.	:	+-	6.0
Spreed			
Tolerance			
cm3/1000 strokes	:		8.0
Check tolerance			
cm3/1000s.	:		12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 17.03.95 Edition Test oil : ISO 4113

Combination No. : 0402646769

Injection pump

Pump designation : PE6P120A320LS7837

: -10

EP type number : 0412626855

Governor

Governer design. : RQV300...950PA1168

; -5

Governer no. : 0421814132

Cust. part No. : 0260740002

Customer-spec. information : MB-NFZ Customer Motor : 0M441 LA Power KW : 250.0

TEST BENCH REQUIREMENTS

Test oil inlet

: 40 : + 2.0 temp. °C Tolerance °C

Overflow valve : 1417413025

Inlet press. bar : 1.5 Tolerance bar : +- 0.1

Overflow quantity

min. l/h : 80 Tolerance l/h : +- 10.0

Test nozzle holde

assembly : 1688901105

Opening pressure

: 208.5 Tolerance bar : + 1.5 Lube oil : 1409918004

Test lines : 1680750075

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : + 1.0

Prestroke mm : 5.25 Tolerance mm : +- 0.05

test only : +- 0.10

Rack travel in mm : 20.50 Tolerance mm : \leftarrow 0.50

Firing order : 6-3-5-2-4-

: 1-

: 0-60-120-180-240 Phasing

: -300-360

: + - 0.30Tolerance

Check

tolerance "NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 6

BASIC SETTING

Rated speed rpm : 550

		l multiple all anno
		+ guide sleeve
Rack travel in m Tolerance mm	m: 15.10 : ← 0.05	travel mm : 5.03 Tolerance mm : + 0.25
Del. quantity	. 1 - 0.05	Rated speed rpm : 790 guide sleeve
cm3/1000 strokes	: 252.0	travel mm : 6.16 Tolerance mm : + 0.25
Tolerance cm3/1000 strokes	: + 1.0	Rated speed rpm : 1103
Check tolerance		guide sleeve travel mm : 10.00
cm3/1000s.	: + 4.0	Tolerance mm : + 0.25
Spreed Tolerance cm3/1000 strokes	: 5.0	Rated speed rpm : 1200 guide sleeve
Check tolerance	; 5.0	+ travel mm : 11.50 + Tolerance mm : + 0.50
cm3/1000s.	: 9.0	GUIDE SLEEVE POSITION
2nd speed rpm	: 300	T GOIDE SCEEVE POSITION
Rack travel in m	m: 6.20	+ control lever
Tolerance mm	: +- 0.30	position degree : - 1
Del. quantity	. , 0.30	Rated speed rpm : 1060
cm3/1000 strokes	: 19.0	T Nated speed (pin) . 1000
Tolerance	. 17.0	T Book through the man a 47 40
cm3/1000 strokes	: +- 3.0	+ Rack travel in mm: 14.10
	: +- 3.0	+ Tolerance mm : +- 1.30
Check tolerance		†
cm3/1000s. Spreed	: + 6.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance cm3/1000 strokes	: 6.0	Rated speed rpm : 550
	: 0.0	
Check tolerance	. 40.0	Aneroid pressure
cm3/1000s.	: 10.0	+ hPa : 1100
4-1		the Del. quantity cm3/1000 strokes : 252.0
(B) SETTING OF IN WITH GOVERNOR	NJECTION PUMP	+ Tolerance + cm3/1000 strokes : +- 1.0
		+ Check tolerance + cm3/1000s. : + 4.0
GUIDE SLEEVE TRAV		Spreed Tolerance
Rated speed rpm guide sleeve	: 300	cm3/1000 strokes : 5.0 Check tolerance
travel mm	: 1.26	+ cm3/1000s. : 9.0
Tolerance mm	: ← 0.20	
Rated speed rpm guide sleeve	: 1009	RATED SPEED
travel mm	: 8.28	+
Tolerance mm	: +- 0.15	+ control lever
	- 	position degree : 123.0
Rated speed rpm guide sleeve	: 575	tolerance degree : +- 4.0
travel mm	: 4.46	+ rack travel mm : 14.10
Tolerance mm	: +- 0.25	+ Rated speed rpm : 995
		+ Tolerance 1/min : + 5

rack travel mm	: 4.00	1	Pressure hPa	•
Rated speed rpm		1	Rated speed rpm	. 400
Tolerance 1/min	· +- 15	I	rack traval ma	• 0 15
rocerance mini	• • • • • • • • • • • • • • • • • • • •	I	rack travel mm Tolerance mm	• 4 0 20
rack travel mm	• 0.70	T	roterance inin	0.20
Tolerance mm		T	Dated aread new	. (00
Rated speed rpm		Ť	Rated speed rpm	: 400
nated speed rpm	: 1200	†	0	450
		†	Pressure hPa	: 150
101 7015			rack travel mm	
FOM IDE		†	Tolerance mm	: ← 0.20
		†	D	550
and mal layer		†	Pressure hPa rack travel mm Tolerance mm	: 550
control lever	70.0	†	rack travel mm	: 13.85
position degree	79.0	†	ioterance mm	: +- 0.20
tolerance degree	: +- 4.0	†		
Tankimas		†	OTAGE OUT	
Testing:		†	START CUT-OUT	
Datasi amand mm	. 700	†	5.4.4	100
Rated speed rpm	: 300	†	Rated speed rpm	: > 100
rack travel mm Tolerance mm	: 3.50	+	Check	
loterance mm	: +- 0.10	†	speed 1/min	
	200	†	Rated speed rpm	: < 220
Rated speed rpm	: 200	t	Check	
		+	speed 1/min	: < 240
CRT mm min.	: > 5.70	+		
		+		
			FUEL DELIVERY CH	ARACTER TICS
CONTINUOUS-ACTIO	N CONTROL	†		
		+	Aneroid pressure	
Rated speed rpm	: 325	+	hPa	
		+	Rated speed rpm	
		+	Del. quantity	
TORQUE CONTROL		+	cm3/1000 strokes	: 242.0
		+	Tolerance	
Rated speed rpm	: 550	+	cm3/1000 strokes	
rack travel mm Tolerance mm	: 15.10	+	Check tolerance	
Tolerance mm	: +- 0.05	+	cm3/1000s.	: + 6.0
		+	Spreed	
Rated speed rpm	: 950	+	Tolerance	
rack travel mm		+	cm3/1000 strokes	: 8.0
Tolerance mm	: +- 0.10	+	Check tolerance	
		+	cm3/1000s.	: 12.0
Rated speed rpm		+		
rack travel mm		+	Aneroid pressure	
Tolerance mm	: 0.20	+	hPa	; 550
		+	Rated speed rpm	: 400
		+	Del. quantity	
ANEROID/ALTITUDE		+	cm3/1000 strokes	: 205.0
COMPENSATOR TEST		+	Tolerance	
		+	cm3/1000 strokes	: ← 1.5
		+	Check tolerance	
SETTING		+	cm3/1000s.	: +- 4.5
		+		
Rated speed rpm		+	Aneroid pressure	
Pressure hPa	: 1100	1	hPa	-
rack travel mm		+	Rated speed rpm	: 500
Tolerance mm	: +- 0.05	1	Del. quantity	
		1	cm3/1000 strokes	: 135.0
MEASUREMENT		1	Tolerance	
Committee to the second of		1	cm3/1000 strokes	: + 1.0
		1	, GOO OU OUO	

Check tolerance cm3/1000s. 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. 12.0 **BREAKAWAY** Rack travel in mm: 14.10 Rated speed rpm Tolerance 1/min STARTING FUEL DELIVERY 100 Rated speed rpm Del. quantity cm3/1000 strokes : 235.0 Tolerance cm3/1000 strokes : +- 20.0 Check tolerance cm3/1000s. : +- 24.0 LOW IDLE 300 Rated speed rpm 6.20 rack travel mm 0.30 Tolerance mm Del. quantity cm3/1000 strokes : 19.0 Tolerance cm3/1000 strokes 3.0 Check tolerance cm3/1000s. 6.0 : +-Spreed Tolerance cm3/1000 strokes 6.0 Check tolerance cm3/1000s. 10.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 17.03.95 Test oil : ISO 4113

Combination No. : 0402646770

Injection pump

Pump designation : PE6P12OA32OLS7836

: -10

EP type number : 0412626854

Governor

Governer design. : RQV300...1050PA1168

: -7

Governer no. : 0421814143

Cust. part No. : 0250749902

Customer—spec. information Customer : MB-NFZ Motor : 0M401 LA Power KW : 200.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1417413047

Inlet press. bar : 1.5
Tolerance bar : + 0.1

Overflow quantity

min. l/h : 75 Tolerance l/h : + 10.0

Test nozzle holde

assembly : 1688901105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5 Lube oil : 1409918004

Test lines : 1680750075

Outside diameter : 8.0

x inside diameter: 3.0 x Length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 1.0 Tolerance bar : + 1.0

Prestroke mm : 5.55
Tolerance mm : + 0.05

test only : \leftarrow 0.10

Rack travel in mm : 20.50 Tolerance mm : +- 0.50

Firing order : 6-3-5-2-4-

: 1-

Phasing : 0-60-120-180-240

: -300-360

Tolerance : \leftarrow 0.30

Check

tolerance °NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 6

BASIC SETTING

Rated speed rpm : 1050

	į.	guido al covo
	<u> </u>	guide sleeve travel mm : 4.53
Rack travel in m	n: 13.00	Tolerance mm : + 0.25
Tolerance mm	": +- 0.05 I	roterance inni : += 0.23
rocerance and	Ι	Rated speed rpm : 608
Del. quantity		Rated speed rpm : 608 guide sleeve
cm3/1000 strokes	: 190.0	travel mm : 5.03
CIIDY TOOD SCHOKES	. 170.0	
Tolerance		Tolerance mm : +- 0.25
cm3/1000 strokes	: +- 1.0 I	Dated anord now . 920
CIIDY TOOD STYCKES	T 1.0	Rated speed rpm : 820
Check tolerance		guide sleeve travel mm : 6.13
cm3/1000s.	: + 4.0	
CIID/ 10003.	· + 4.0 †	Tolerance mm : +- 0.25
Canad		Dated and all the 1407
Spreed	Ť	Rated speed rpm : 1183
Tolerance	. 50	guide sleeve
cm3/1000 strokes	: 5.0 +	travel mm : 10.00
Charle dellarence		Tolerance mm : + 0.25
Check tolerance		Data dama adama 4200
cm3/1000s.	: 9.0 +	Rated speed rpm : 1280
2	. 700	guide sleeve
2nd speed rpm	: 300 +	travel mm : 11.50
Seel Americal in an	T 00	Tolerance mm : \leftarrow 0.50
Rack travel in mm		
Tolerance mm	: + 0.30 +	
Del. quantity	10.0	GUIDE SLEEVE POSITION
cm3/1000 strokes	: 19.0 +	
Tolerance	+	
cm3/1000 strokes	: + 3.0 +	control lever
Check tolerance	†	position degree : - 1
cm3/1000s.	: + 6.0 +	Rated speed rpm : 1145
Spreed	+	
Tolerance	<u> </u>	Rack travel in mm : 12.00
cm3/1000 strokes	: 6.0 +	Tolerance mm : + 1.30
Check tolerance	+	
cm3/1000s.	: 10.0	
	+	FULL LOAD DELIVERY AT FULL LOAD STOP
	+	
(B) SETTING OF IN	NECTION PUMP +	Rated speed rpm : 1050
WITH GOVERNOR	+	Aneroid pressure
	+	hPa : 800
		Del. quantity
GUIDE SLEEVE TRAV	EL +	cm3/1000 strokes : 190.0
		Tolerance
Rated speed rpm	: 300 +	cm3/1000 strokes : +- 1.0
guide sleeve	+	Check tolerance
travel mm	: 1.29	cm3/1000s. : +- 4.0
Tolerance mm	: ← 0.25	Spreed
	+	Tolerance
Rated speed rpm	: 1107 +	cm3/1000 strokes : 5.0
guide sleeve	+	Check tolerance
travel mm	: 8.52 +	cm3/1000s. : 9.0
Tolerance mm	: + 0.25 +	
	+	
Rated speed rpm	: 1640	RATED SPEED
guide sleeve	+	
travel mm	: 25.13 +	
Tolerance mm	: + 0.25 +	control lever
	+	position degree : 120.0
Rated speed rpm	: 558 +	tolerance degree : +- 4.0
	·	

rack travel mm Rated speed rpm Tolerance 1/min rack travel mm Rated speed rpm Tolerance 1/min rack travel mm Tolerance mm Rated speed rpm LOW IDLE	: 4.00 : 1170 : + 15	Pressure hPa : - Rated speed rpm : 400 rack travel mm : 10.55 Tolerance mm : + 0.15 Rated speed rpm : 400 Pressure hPa : 200 rack travel mm : 11.40 Tolerance mm : + 0.15 Pressure hPa : 350 rack travel mm : 12.25 Tolerance mm : + 0.15
control lever position degree tolerance degree Testing: Rated speed rpm rack travel mm Tolerance mm	: +- 4.0	START CUT-OUT Rated speed rpm : > 100 Check speed 1/min : > 80 Rated speed rpm : < 220 Check speed 1/min : < 240
Tolerance mm Rated speed rpm		FUEL DELIVERY CHARACTERISTICS
CRT mm min.		Aneroid pressure hPa : 350 Rated speed rpm : 400
CONTINUOUS-ACTION	N CONTROL	+ Del. quantity
Rated speed rpm	: 350	+ cm3/1000 strokes : 150.0 + Tolerance + cm3/1000 strokes : +- 1.5
TORQUE CONTROL		+ Check tolerance + cm3/1000S. : + 4.5
Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm	: 13.00 : + 0.05 : 550	Aneroid pressure hPa : 800 Rated speed rpm : 550 Del. quantity cm3/1000 strokes : 189.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance
ANEROID/ALTITUDE COMPENSATOR TEST		+ cm3/1000s. : + 6.0 + Spreed + Tolerance - cm3/1000 strokes : 8.0
SETTING		Check tolerance cm3/1000s. : 12.0
Rated speed rpm Pressure hPa rack travel mm	: 800	Aneroid pressure hPa : - Rated speed rpm : 500
Tolerance mm MEASUREMENT	: +- 0.05	Del. quantity cm3/1000 strokes : 127.0

Tolerance			
cm3/1000 strokes	: +-	1.0	
Check tolerance			
cm3/1000s.	: +-	4.0	
Spreed			
Tolerance			
cm3/1000 strokes	:	8.0	
Check tolerance			
cm3/1000s.	:	12.0	
			

BREAKAWAY

Rack travel in mm : 12.00
Rated speed rpm : 1095
Tolerance 1/min : + 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
Del. quantity
cm3/1000 strokes : 210.0
Tolerance
cm3/1000 strokes : + 20.0
Check tolerance
cm3/1000s. : + 24.0

LOW IDLE

300 Rated speed rpm rack travel mm 5.80 : **←** 0.30 Tolerance mm Del. quantity cm3/1000 strokes : 19.0 Tolerance cm3/1000 strokes 3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance 6.0 cm3/1000 strokes : Check tolerance cm3/1000s. 10.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 17.03.95 : ISO 4113

Combination No. : 0402646771

Injection pump

Pump designation : PE6P12OA32OLS7836-2

EP type number : 0412626944

Governor

Governer design. : RQV300...1050PA1168

: -8

Governer no.

: 0421814141

Cust. part No. : 0250749802

Customer-spec. information Customer : MB-NFZ : 0M401 LA Motor Power KW : 180.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 1417413047

Inlet press. bar : Tolerance bar : + 0.1

Overflow quantity

min. L/h : +- 10.0 Tolerance l/h

Test nozzle holde

: 1688901105 assembly

Opening pressure

208.5 bar Tolerance bar : +- 1.5 Lube oil : 1409918004

Test lines : 1680750075

Outside diameter : 8.0

x inside diameter :

x Length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : + 1.0

Prestroke mm : 5.55 : +- 0.05 Tolerance mm

test only : + 0.10

Rack travel in mm: 20.50 Tolerance mm : + 0.50

Firing order : 6-3-5-2-4-

: 1-

Phasing : 0-60-120-180-240

: -300-360 Tolerance : +- 0.30

Check

tolerance "NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 6

BASIC SETTING

Rated speed rpm : 1050

		🕂 guide sleeve
Rack travel in mm		travel mm : 5.03
Tolerance mm	: ← 0.05	† Tolerance mm : + 0.25
Not guantity		- † Botad anood pup a 920
Del. quantity cm3/1000 strokes	: 173.0	Rated speed rpm : 820 guide steeve
CIID7 1000 3 C1 0 CC3	. 175.0	travel mm : 6.13
Tolerance		+ Tolerance mm : + 0.25
cm3/1000 strokes	: +- 1.0	Total alloc limit
		_ + Rated speed rpm : 1183
Check tolerance		guide sleeve
cm3/1000s.	: ← 4.0	+ travel mm : 10.00
		_ + Tolerance mm : + 0.25
Spreed		†
Tolerance	. 5.0	+ Rated speed rpm : 1280
cm3/1000 strokes	: 5.0	guide sleeve
Check tolerance		_
cm3/1000s.	: 9.0	T Toterance inin : += 0.50
CIB/ 10005.	. 7.0	
2nd speed rpm	: 300	↓ GUIDE SLEEVE POSITION
anta apasa tom		
Rack travel in mm	: 5.80	+
Tolerance mm	: +- 0.30	+ control lever
Del. quantity		+ position degree : - 1
cm3/1000 strokes	: 19.0	Rated speed rpm : 1150
Tolerance	. 7.0	†
cm3/1000 strokes	: + 3.0	+ Rack travel in mm : 11.40
Check tolerance	: + 6.0	† Tolerance mm : + 1.30
cm3/1000s.	: 0.0	Ť
Spreed Tolerance		I FULL LOAD DELTHERY AT SULL LOAD STOP
Tolerance	: 6.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance cm3/1000 strokes	: 6.0	+
Tolerance	: 6.0 : 10.0	+ Rated speed rpm : 1050
Tolerance cm3/1000 strokes Check tolerance		+
Tolerance cm3/1000 strokes Check tolerance cm3/1000S.	: 10.0	Rated speed rpm : 1050 Aneroid pressure hPa : 700 Del. quantity
Tolerance cm3/1000 strokes Check tolerance cm3/1000S. (B) SETTING OF INC.	: 10.0	Rated speed rpm : 1050 Aneroid pressure hPa : 700 Del. quantity cm3/1000 strokes : 173.0
Tolerance cm3/1000 strokes Check tolerance cm3/1000S.	: 10.0	Rated speed rpm : 1050 Aneroid pressure hPa : 700 Del. quantity cm3/1000 strokes : 173.0 Tolerance
Tolerance cm3/1000 strokes Check tolerance cm3/1000S. (B) SETTING OF INC.	: 10.0	Rated speed rpm : 1050 Aneroid pressure hPa : 700 Del. quantity cm3/1000 strokes : 173.0 Tolerance cm3/1000 strokes : +- 1.0
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. (B) SETTING OF INCOMITH GOVERNOR	: 10.0 JECTION PUMP	Rated speed rpm : 1050 Aneroid pressure hPa : 700 Del. quantity cm3/1000 strokes : 173.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance
Tolerance cm3/1000 strokes Check tolerance cm3/1000S. (B) SETTING OF INC.	: 10.0 JECTION PUMP	Rated speed rpm : 1050 Aneroid pressure hPa : 700 Del. quantity cm3/1000 strokes : 173.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. (B) SETTING OF IN. WITH GOVERNOR GUIDE SLEEVE TRAVE	: 10.0 JECTION PUMP	Rated speed rpm : 1050 Aneroid pressure hPa : 700 Del. quantity cm3/1000 strokes : 173.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed
Tolerance cm3/1000 strokes Check tolerance cm3/1000S. (B) SETTING OF INCOMITH GOVERNOR GUIDE SLEEVE TRAVE Rated speed rpm	: 10.0 JECTION PUMP	Rated speed rpm : 1050 Aneroid pressure hPa : 700 Del. quantity cm3/1000 strokes : 173.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance
Tolerance cm3/1000 strokes Check tolerance cm3/1000S. (B) SETTING OF INCOMITH GOVERNOR GUIDE SLEEVE TRAVE Rated speed rpm guide sleeve	: 10.0 JECTION PUMP EL : 300	Rated speed rpm : 1050 Aneroid pressure hPa : 700 Del. quantity cm3/1000 strokes : 173.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0
Tolerance cm3/1000 strokes Check tolerance cm3/1000S. (B) SETTING OF INCOMITH GOVERNOR GUIDE SLEEVE TRAVE Rated speed rpm	: 10.0 JECTION PUMP	Rated speed rpm : 1050 Aneroid pressure hPa : 700 Del. quantity cm3/1000 strokes : 173.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance
Tolerance cm3/1000 strokes Check tolerance cm3/1000S. (B) SETTING OF INCOMITH GOVERNOR GUIDE SLEEVE TRAVE Rated speed rpm guide sleeve travel mm	: 10.0 JECTION PUMP EL : 300 : 1.29	Rated speed rpm : 1050 Aneroid pressure hPa : 700 Del. quantity cm3/1000 strokes : 173.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. (B) SETTING OF INC WITH GOVERNOR GUIDE SLEEVE TRAVE Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm	: 10.0 JECTION PUMP EL : 300 : 1.29	Rated speed rpm : 1050 Aneroid pressure hPa : 700 Del. quantity cm3/1000 strokes : 173.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 9.0
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. (B) SETTING OF INC WITH GOVERNOR GUIDE SLEEVE TRAVE Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	: 10.0 JECTION PUMP EL : 300 : 1.29 : + 0.20 : 1107	Rated speed rpm : 1050 Aneroid pressure hPa : 700 Del. quantity cm3/1000 strokes : 173.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. (B) SETTING OF INAMITH GOVERNOR GUIDE SLEEVE TRAVE Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 10.0 JECTION PUMP EL : 300 : 1.29 : + 0.20 : 1107 : 8.51	Rated speed rpm : 1050 Aneroid pressure hPa : 700 Del. quantity cm3/1000 strokes : 173.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 9.0
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. (B) SETTING OF INC WITH GOVERNOR GUIDE SLEEVE TRAVE Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	: 10.0 JECTION PUMP EL : 300 : 1.29 : + 0.20 : 1107	Rated speed rpm : 1050 Aneroid pressure hPa : 700 Del. quantity cm3/1000 strokes : 173.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 9.0 RATED SPEED
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. (B) SETTING OF INA WITH GOVERNOR GUIDE SLEEVE TRAVE Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Tolerance mm	: 10.0 JECTION PUMP EL : 300 : 1.29 : + 0.20 : 1107 : 8.51 : + 0.15	Rated speed rpm : 1050 Aneroid pressure hPa : 700 Del. quantity cm3/1000 strokes : 173.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 9.0 RATED SPEED
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. (B) SETTING OF INA WITH GOVERNOR GUIDE SLEEVE TRAVE Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm Rated speed rpm Rated speed rpm	: 10.0 JECTION PUMP EL : 300 : 1.29 : + 0.20 : 1107 : 8.51	Rated speed rpm : 1050 Aneroid pressure hPa : 700 Del. quantity cm3/1000 strokes : 173.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever position degree : 119.0
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. (B) SETTING OF INA WITH GOVERNOR GUIDE SLEEVE TRAVE Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 10.0 JECTION PUMP EL : 300 : 1.29 : + 0.20 : 1107 : 8.51 : + 0.15 : 558	Rated speed rpm : 1050 Aneroid pressure hPa : 700 Del. quantity cm3/1000 strokes : 173.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 9.0 RATED SPEED
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. (B) SETTING OF INA WITH GOVERNOR GUIDE SLEEVE TRAVE Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 10.0 JECTION PUMP EL : 300 : 1.29 : + 0.20 : 1107 : 8.51 : + 0.15 : 558 : 4.53	Rated speed rpm : 1050 Aneroid pressure hPa : 700 Del. quantity cm3/1000 strokes : 173.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED RATED SPEED control lever position degree : 119.0 tolerance degree : + 4.0
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. (B) SETTING OF INA WITH GOVERNOR GUIDE SLEEVE TRAVE Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 10.0 JECTION PUMP EL : 300 : 1.29 : + 0.20 : 1107 : 8.51 : + 0.15 : 558	Rated speed rpm : 1050 Aneroid pressure hPa : 700 Del. quantity cm3/1000 strokes : 173.0 Tolerance cm3/1000strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED RATED SPEED rack travel mm : 11.40
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. (B) SETTING OF INC WITH GOVERNOR GUIDE SLEEVE TRAVE Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 10.0 JECTION PUMP EL : 300 : 1.29 : + 0.20 : 1107 : 8.51 : + 0.15 : 558 : 4.53	Rated speed rpm : 1050 Aneroid pressure hPa : 700 Del. quantity cm3/1000 strokes : 173.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED RATED SPEED control lever position degree : 119.0 tolerance degree : + 4.0
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. (B) SETTING OF INA WITH GOVERNOR GUIDE SLEEVE TRAVE Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 10.0 JECTION PUMP EL : 300 : 1.29 : + 0.20 : 1107 : 8.51 : + 0.15 : 558 : 4.53 : + 0.25	Rated speed rpm : 1050 Aneroid pressure hPa : 700 Del. quantity cm3/1000 strokes : 173.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED RATED SPEED rack travel mm : 11.40 Rated speed rpm : 1095

rack travel mm Rated speed rpm Tolerance 1/min	: 1170 : +- 15	Rated speed rpm : 400 Pressure hPa : 200
rack travel mm Tolerance mm Rated speed rpm	: +- 0.75	rack travel mm : 11.45 Tolerance mm : + 0.20
LOW IDLE		Pressure hPa : 300 rack travel mm : 12.00 Tolerance mm : +- 0.20
control lever position degree tolerance degree	: 65.0 : ← 4.0	START CUT-OUT Rated speed rpm : > 100
Testing:		Check
Rated speed rpm rack travel mm Tolerance mm	: 3.50	Check speed 1/min : < 240
Rated speed rpm	; 200	FUEL DELIVERY CHARACTERISTICS
CRT mm min.	: > 5.30	Aneroid pressure hPa : 200 Rated speed rpm : 0
CONTINUOUS-ACTION	N CONTROL	Del. quantity cm3/1000 strokes : 119.0
Rated speed rpm	: 350	Tolerance + cm3/1000 strokes : +- 1.5
TORQUE CONTROL		Check tolerance : +- 4.5
Rated speed rpm rack travel mm Tolerance mm	: 12.40	Aneroid pressure hPa : 700 Rated speed rpm : 550 Del. quantity
Rated speed rpm rack travel mm Tolerance mm	: 550 : 12.40 : ← 0.10	- cm3/1000 strokes : 169.0 - Tolerance - cm3/1000 strokes : + 3.0
ANEROID/ALTITUDE		Check tolerance - cm3/1000s. : + 6.0 - Spreed
COMPENSATOR TEST		Tolerance : 8.0 Check tolerance
SETTING		cm3/1000s. : 12.0
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	• 700	Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity
MEASUREMENT		+ cm3/1000 strokes : 135.0 + Tolerance + cm3/1000 strokes : +- 1.0
Pressure hPa Rated speed rpm rack travel mm Tolerance mm		Check tolerance cm3/1000s. : +- 4.0 Spreed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. 12.0

BREAKAWAY

Rack travel in mm : 11.40 Rated speed rpm 1095 Tolerance 1/min

STARTING FUEL DELIVERY

Rated speed rpm 100

Del. quantity

cm3/1000 strokes : 210.0

Tolerance

cm3/1000 strokes : + 15.0

Check tolerance

cm3/1000s. : +- 19.0

LOW IDLE

300 Rated speed rpm rack travel mm 5.80 Tolerance mm 0.30

Del. quantity

cm3/1000 strokes : 19.0

Tolerance

cm3/1000 strokes 3.0

Check tolerance

cm3/1000s. 6.0

Spreed

Tolerance

cm3/1000 strokes : 6.0

Check tolerance cm3/1000s. 10.0

Note remarks

Refer to Service Info for test and adjustment instructions.

See microcard(s) W400/...

Edition : 17.03.95 Test oil : ISO 4113

Combination No. : 0402646970

Injection pump

Pump designation : PE6P120A320RS7248

: -10Y

EP type number : 0412626902

Governor

Governer design. : RQV275...1150PA986

Governer no. : 0421813920

Cust. part No. : 1248046/4

Customer-spec. information

Customer : DAF

Motor : RS 180 L Power KW : 180.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1417413025

Inlet press. bar : 1.5
Tolerance bar : + 0.1

Overflow quantity

min. l/h : 130 Tolerance l/h : +- 10.0

Test nozzle holde

assembly : 1688901105

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5 Test lines : 1680750089

Outside diameter : 8.0

x inside diameter: 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : -.25
Tolerance mm : +- 0.05

test only : + 0.10

Rack travel in mm : 10.50 Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.30

Check

tolerance °NW : +- 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 1

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm : 10.75 Tolerance mm : +- 0.05

C18

		1 5 1 1 7.5
Dal guantitus		Rated speed rpm : 365
Del. quantity cm3/1000 strokes	. 1/.7 5	<pre>f guide sleeve f travel mm : 2.52</pre>
CIID 1000 2110762	147.5	+ Tolerance mm : + 0.25
Tolerance		
cm3/1000 strokes	: : + 1.0	Rated speed rpm : 450
		guide sleeve
Check tolerance		travel mm : 3.07
cm3/1000s.	: +- 4.0	+ Tolerance mm : + 0.25
		+
Spreed		+ Rated speed rpm : 1500
Tolerance		+ guide sleeve
cm3/1000 strokes	5.0	travel mm : 11.50
		+ Tolerance mm : + 0.50
Check tolerance		†
cm3/1000s.	: 9.0	
Ond aread are	. 376	GUIDE SLEEVE POSITION
2nd speed rpm	: 275	†
Dook traval in	5 / 0	T control laws
Rack travel in mo	m: 5.40 :+- 0.10	control lever
Del. quantity	0.10	<pre>position degree : - 1 Rated speed rpm : 1340</pre>
cm3/1000 strokes	: 16.0	Rated speed rpm : 1340
Tolerance	. ,5.0	T Rack travel in mm: 9.70
cm3/1000 strokes	: + 3.0	Tolerance mm : + 1.30
Check tolerance	5.0	Total di loc light
cm3/1000s.	: +- 6.0	
Spreed	4.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance		+ OLE LOND SECTION AT TOLL LOND STOR
cm3/1000 strokes	: 8.0	Rated speed rpm : 1000
Check tolerance		+ Aneroid pressure
cm3/1000s.	: 12.0	+ hPa : 1000
		+ Del. quantity
		+ cm3/1000 strokes : 147.5
(B) SETTING OF IN	NJECTION PUMP	+ Tolerance
WITH GOVERNOR		+ cm3/1000 strokes : +- 1.0
		† Check tolerance
		- + cm3/1000s. : + 4.0
GUIDE SLEEVE TRAV	/EL	+ Spreed
		+ Tolerance
Rated speed rpm	VEL : 275	Tolerance cm3/1000 strokes : 5.0
Rated speed rpm guide sleeve	: 275	Tolerance cm3/1000 strokes : 5.0 Check tolerance
Rated speed rpm guide sleeve travel mm	: 275 : 1.44	Tolerance cm3/1000 strokes : 5.0
travel mm	: 275	Tolerance cm3/1000 strokes : 5.0 Check tolerance
Rated speed rpm guide sleeve travel mm Tolerance mm	: 275 : 1.44 : + 0.15	Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm	: 275 : 1.44	Tolerance cm3/1000 strokes : 5.0 Check tolerance
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	: 275 : 1.44 : ← 0.15 : 1206	Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm	: 275 : 1.44 : ← 0.15 : 1206 : 8.25	Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000S. : 9.0 RATED SPEED
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm	: 275 : 1.44 : ← 0.15 : 1206	Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000S. : 9.0 RATED SPEED control lever
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 275 : 1.44 : + 0.15 : 1206 : 8.25 : + 0.20	Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000S. : 9.0 RATED SPEED control lever position degree : 120.0
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 275 : 1.44 : ← 0.15 : 1206 : 8.25	Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000S. : 9.0 RATED SPEED control lever
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	: 275 : 1.44 : + 0.15 : 1206 : 8.25 : + 0.20 : 799	Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever position degree : 120.0 tolerance degree : + 4.0
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm	: 275 : 1.44 : → 0.15 : 1206 : 8.25 : → 0.20 : 799 : 5.21	Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever position degree : 120.0 tolerance degree : + 4.0 rack travel mm : 9.75
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm	: 275 : 1.44 : + 0.15 : 1206 : 8.25 : + 0.20 : 799	Tolerance cm3/1000 strokes: 5.0 Check tolerance cm3/1000s.: 9.0 RATED SPEED control lever position degree: 120.0 tolerance degree: +4.0 rack travel mm: 9.75 Rated speed rpm: 1182
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 275 : 1.44 : + 0.15 : 1206 : 8.25 : + 0.20 : 799 : 5.21 : + 0.25	Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever position degree : 120.0 tolerance degree : + 4.0 rack travel mm : 9.75
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Tolerance mm	: 275 : 1.44 : → 0.15 : 1206 : 8.25 : → 0.20 : 799 : 5.21	Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever position degree : 120.0 tolerance degree : + 4.0 rack travel mm : 9.75 Rated speed rpm : 1182 Tolerance 1/min : + 5
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 275 : 1.44 : ← 0.15 : 1206 : 8.25 : ← 0.20 : 799 : 5.21 : ← 0.25 : 315	Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever position degree : 120.0 tolerance degree : + 4.0 rack travel mm : 9.75 Rated speed rpm : 1182 Tolerance 1/min : + 5 rack travel mm : 4.00
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm	: 275 : 1.44 : + 0.15 : 1206 : 8.25 : + 0.20 : 799 : 5.21 : + 0.25	Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever position degree : 120.0 tolerance degree : + 4.0 rack travel mm : 9.75 Rated speed rpm : 1182 Tolerance 1/min : + 5

rack travel mm Tolerance mm Rated speed rpm	: 0.70 : +- 0.70 : 1450
LOW IDLE	
control lever position degree tolerance degree	: 83.0 : + 4.0
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 275 : 4.70 : + 0.10
Rated speed rpm	: 175
CRT mm min.	: > 7.40
CONTINUOUS-ACTION	CONTROL
Rated speed rpm	: 340
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	: 1000 : 10.75 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 1150 : 10.75 : + 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 600 : 1000 : 10.75 : ← 0.05
MEASUREMENT	
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 600 : 9.50 : ← 0.10
Rated speed rpm	: 600
Pressure hPa	: 260

Tolerance mm	: 10.35 : + 0.05
Pressure hPa rack travel mm Tolerance mm	: 190 : 9.90 : + 0.10
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	RACTERISTICS : - : 600 : 121.0
BREAKAWAY	
Tolerance 1/min	: +- 5
Rated speed rpm	: 275 : 5 40
Rated speed rpm rack travel mm Tolerance mm	: 275 : 5.40 : + 0.10
Rated speed rpm rack travel mm Tolerance mm Del. quantity	: 5.40 : + 0.10
Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance	: 5.40
Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: 5.40 : + 0.10
Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 5.40 : + 0.10 : 16.0
Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes	: 5.40 : + 0.10 : 16.0 : + 3.0
LOW IDLE Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: + 5.40 : + 0.10 : 16.0 : + 3.0 : + 6.0
Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance	: + 0.10 : + 16.0 : + 3.0 : + 6.0 : 8.0

Note remarks

Refer to Service Info for test and adjustment instructions.

See microcard(s) W400/...

17.03.95 Test oil

Combination No. : 0402646971

Injection pump

Pump designation : PE6P120A320RS7218

: -107

EP type number : 0412626892

Governor

Governer design. : RQV275...1000PA939

: -2

Governer no. : 0421813986

Cust. part No. : 1249337/5

Customer-spec. information

Customer : DAF

: WS 242 L Motor

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C 40 : +- 2.0 Tolerance °C

Overflow valve : 1417413025

Inlet press. bar : 1.5

Overflow quantity

min. L/h : 105 Tolerance L/h : + 10.0

Test nozzle holde

: 1688901105 assembly

Opening pressure

: 208.5 Tolerance bar : + 1.5 Test Lines : 1680750089

Outside diameter : 8.0

x inside diameter : 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : -.35
Tolerance mm : +- 0.05

test only : \leftarrow 0.10

Rack travel in mm: 14.50 Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

: + 0.30Tolerance

Check

tolerance °NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 1

BASIC SETTING

Rated speed rpm : 850

Rack travel in mm : 13.95 Tolerance mm : \leftarrow 0.05

4	Rated speed rpm : 351
Del. quantity	guide sleeve
cm3/1000 strokes : 210.0	travel mm : 2.45 Tolerance mm : + 0.25
Tolerance	
cm3/1000 strokes : + 1.0 +	Rated speed rpm : 380 guide sleeve
Check tolerance	travel mm : 2.66
cm3/1000s. : +- 4.0	Tolerance mm : +- 0.25
Spreed	Rated speed rpm : 1310
Tolerance	guide sleeve
cm3/1000 strokes : 5.0	travel mm : 11.50 Tolerance mm : \leftarrow 0.50
Check tolerance	Total disconsists
cm3/1000s. : 9.0	
201	GUIDE SLEEVE POSITION
2nd speed rpm : 275	
Rack travel in mm: 6.10	control lever
Tolerance mm : + 0.10 +	position degree : - 1
Del. quantity + cm3/1000 strokes : 17.0 +	Rated speed rpm : 1130
cm3/1000 strokes : 17.0 + Tolerance +	Rack travel in mm : 13.90
cm3/1000 strokes : + 3.0 +	Tolerance mm : +- 1.30
Check tolerance	
cm3/1000s. : + 6.0	FILL LOSD DELTHEDY ST FILL LOSD OTOD
Spreed +	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes : 8.0	Rated speed rpm : 850
Check tolerance	Aneroid pressure
cm3/1000s. : 12.0	hPa : 1000
Ī	Del. quantity cm3/1000 strokes : 210.0
(B) SETTING OF INJECTION PUMP	Tolerance
WITH GOVERNOR +	cm3/1000 strokes : + 1.0
	Check tolerance cm3/1000s. : +- 4.0
GUIDE SLEEVE TRAVEL	Spreed : +- 4.0
+	Tolerance
Rated speed rpm : 275	cm3/1000 strokes : 5.0
guide sleeve + travel mm : 1.34 +	Check tolerance cm3/1000s. : 9.0
Tolerance mm : + 0.25	. , , , , , , , , , , , , , , , , , , ,
+	
Rated speed rpm : 1058 + guide sleeve +	RATED SPEED
travel mm : 8.05	
Tolerance mm : + 0.25	control lever
†	position degree : 119.0
Rated speed rpm : 676 + guide sleeve	tolerance degree : +- 4.0
travel mm : 4.49	rack travel mm : 12.95
Tolerance mm : + 0.25	Rated speed rpm : 1042
B-411 701	Tolerance 1/min : + 5
Rated speed rpm : 301 + guide sleeve +	rack travel mm : 4.00
travel mm : 1.78	Rated speed rpm : 1160
Tolerance mm : + 0.25	Tolerance 1/min : +- 15
+	

rack travel mm Tolerance mm Rated speed rpm	: +- 0.70
LOW IDLE	
control lever position degree tolerance degree	: 82.0 : ← 4.0
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 275 : 5.00 : + 0.10
Rated speed rpm	: 175
CRT mm min.	: > 7.50
CONTINUOUS—ACTION	N CONTROL
Rated speed rpm	: 325
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	
Rated speed rpm rack travel mm Tolerance mm	: 1000 : 13.95 : +- 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 600 : 1000 : 13.95 : ← 0.05
MEASUREMENT	
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 600 : 11.80 : +- 0.10
Rated speed rpm	: 600
Pressure hPa	: 420

rack travel mm : 13.35 : +- 0.05 Tolerance mm Pressure hPa 300 rack travel mm 12.55 : +- 0.10 Tolerance mm FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa 600 Rated speed rpm Del. quantity cm3/1000 strokes : 153.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. 4.0 : +--BREAKAWAY Rack travel in mm: 12.95 Rated speed rpm : 1 2 Tolerance 1/min : + LOW IDLE Rated speed rpm : 275 rack travel mm 6.10 : +- 0.10 Tolerance mm Del. quantity cm3/1000 strokes : 17.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. : +-6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s.12.0

Note remarks

Refer to Service Info for test and adjustment instructions.

See microcard(s) W400/...

Edition : 17.03.95 Test oil : ISO 4113

Combination No. : 0402646973

Injection pump

Pump designation : PE6P120A320RS7218

: -10Z

EP type number : 0412626892

Governor

Governer design. : RQ275/1000PA936-2

Governer no. : 0421801633

Cust. part No. : 1249172/5

Customer-spec. information

: DAF Customer : WS 242 L Motor

Power KW : 242.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C 40 Tolerance °C : + 2.0

Overflow valve : 1417413025

Inlet press. bar : Tolerance bar : + 0.1

Overflow quantity

110 min. L/h : + 10.0 Tolerance l/h

Test nozzle holde

: 1688901105 assembly

Opening pressure

208.5 bar : +- 1.5 Tolerance bar

Test lines : 1680750089

Outside diameter : 8.0

x inside diameter: 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +-

Prestroke mm 5.35 Tolerance mm : + 0.05

test only : + 0.10

Rack travel in mm: 14.50 Tolerance mm : +- 0.50

: 1-5-3-6-2-Firing order

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.30

Check

tolerance °NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 1

BASIC SETTING

Rated speed rpm 850

Rack travel in mm : 13.95

Tolerance mm :	 0.0 5 -	
	•	Rated speed rpm : 450
Del. quantity cm3/1000 strokes :	210.0	- guide sleeve - travel mm : 6.00
clipy tood attores .	210.0	Tolerance mm : + 0.10
Tolerance	-	
cm3/1000 strokes :	⊢ 1.0 -	Rated speed rpm : 1220
Check tolerance		- guide sleeve - travel mm : 11.50
cm3/1000s. : -	⊢ 4.0 -	- Tolerance mm : + 0.50
0		
Spreed Tolerance	-	- GUIDE SLEEVE POSITION
cm3/1000 strokes :	5.0 -	- SOTOC OFFICAL LOCALITOR
	-	
Check tolerance cm3/1000s. :	9.0	- control lever - position degree : – 1
CIID7 10005.	7.0	- Rated speed rpm : 550
2nd speed rpm :	275	•
Rack travel in mm :	6.10	Rack travel in mm : 16.00 Tolerance mm : + 0.60
	→ 0.10 -	roterance mm : TO 0.00
Del. quantity		
cm3/1000 strokes :	17.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance cm3/1000 strokes : +	- 3.0 -	- Rated speed rpm : 850
Check tolerance	3.0	- Aneroid pressure
cm3/1000s. : +	- 6.0 -	- hPa : 1000
Spreed Tolerance	1	- Del. quantity - cm3/1000 strokes : 210.0
cm3/1000 strokes :	8.0	- Tolerance
Check tolerance		- cm3/1000 strokes : + 1.0
cm3/1000s. :	12.0	- Check tolerance
]	- cm3/1000s. : +- 4.0 - Spreed
(B) SETTING OF INJECT	ION PUMP	- Tolerance
WITH GOVERNOR	+	- cm3/1000 strokes : 5.0
		- Check tolerance - cm3/1000s. : 9.0
GUIDE SLEEVE TRAVEL	+	
Datad annual rum	275	DATES COEFS
Rated speed rpm : guide sleeve	275	- RATED SPEED
travel mm :	1.64	
Tolerance mm : +	- 0.10	control lever
Rated speed rpm :	1047	position degree : 109.0 tolerance degree : +- 4.0
guide sleeve	1341	
travel mm :	6.43	rack travel mm : 12.95
Tolerance mm : +	- 0.10 	Rated speed rpm : 1042 Tolerance 1/min : +- 8
Rated speed rpm :	1000	Tolerance 1/min : +- 8
guide sleeve	+	rack travel mm : 4.00
travel mm :	6.00	Rated speed rpm : 1135
Tolerance mm : +	- 0.10	Tolerance 1/min : +- 15
Rated speed rpm :	356	rack travel mm : 0.70
guide sleeve	1 17	Tolerance mm : + 0.70
travel mm : +	4.13 - 0.10	Rated speed rpm : 1250
FOLETABLE RMI : T	J. 10	

LOW IDLE

control lever position degree : 73.0 tolerance degree : +- 4.0

Testing:

Rated speed rpm 2 275
rack travel mm : 5.00
Tolerance mm : +- 0.10

rack travel mm : 2.00
Rated speed rpm : 350
Tolerance 1/min : +- 20

Rated speed rpm : 175

CRT mm min. : > 6.50

TORQUE CONTROL

Rated speed rpm : 850 rack travel mm : 13.95 Tolerance mm : + 0.05

Rated speed rpm : 1000 rack travel mm : 13.95 Tolerance mm : + 0.10

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 600
Pressure hPa : 1000
rack travel mm : 13.95
Tolerance mm : + 0.05

MEASUREMENT

Pressure hPa : Rated speed rpm : 600
rack travel mm : 11.80
Tolerance mm : + 0.10

Rated speed rpm : 600

Pressure hPa : 420 rack travel mm : 13.35 Tolerance mm : +- 0.05

Pressure hPa : 300

rack travel mm : 12.55 Tolerance mm : + 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : Rated speed rpm : 600
Del. quantity
cm3/1000 strokes : 153.0

Tolerance

cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0

BREAKAWAY

Rack travel in mm : 12.95
Rated speed rpm : 1042
Tolerance 1/min : + 8

LOW IDLE

Rated speed rpm 275 rack travel mm 6.10 Tolerance mm : + 0.10Del. quantity cm3/1000 strokes : 17.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 17.03.95 Test oil : ISO 4113

Combination No. : 0402646986

Injection pump

Pump designation : PE6P120A320RS7248

: -10Y

EP type number : 0412626902

Governor

Governer design. : RQ275/1150PA987

Governer no. : 0421801578

Cust. part No. : 1248043/4

Customer-spec. information

Customer : DAF

Motor : RS 180 L

Power KW : 180.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1417413025

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1688901105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1680750089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 5.25 Tolerance mm : + 0.05

test only : \leftarrow 0.10

Rack travel in mm : 14.50 Tolerance mm : \div 0.50

Firing order : 1-5- 3- 6- 2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.30

Check

tolerance °NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 1

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm : 10.75 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 147.5

Tolerance cm3/1000 strokes : +-	1.0	Check tolerance cm3/1000s.	: 9.0
Check tolerance cm3/1000s. : +-	4.0	RATED SPEED	
Spreed Tolerance cm3/1000 strokes :	5.0	control lever position degree tolerance degree	: 190.0 : + 4.0
Check tolerance cm3/1000s. :	9.0	rack travel mm	: 9.75
2nd speed rpm : 2	275	Rated speed rpm Tolerance 1/min	: 1207 : + 8
Tolerance mm : +- Del. quantity	5.40 0.10	rack travel mm Rated speed rpm Tolerance 1/min	: 4.00 : 1290 : ← 15
Tolerance cm3/1000 strokes : +-	+	rack travel mm Tolerance mm	: 0.70 : + 0.70
Check tolerance cm3/1000S. : +- Spreed	6.0	Rated speed rpm	: 1450
Tolerance cm3/1000 strokes :	8.0	LOW IDLE	
Check tolerance cm3/1000s. :	12.0	control lever position degree	: 74.0
(B) SETTING OF INJECTION WITH GOVERNOR	I PUMP	tolerance degree Testing:	: +- 4.0
	Ţ	Rated speed rpm rack travel mm	: 275 : 4.70
GUIDE SLEEVE POSITION	‡	Tolerance mm	: + 0.10
control lever position degree : - 1 Rated speed rpm : 5	50	rack travel mm Rated speed rpm Tolerance 1/min	: 2.00 : 340 : + 20
Rack travel in mm : 1		, , , , , , , , , , , , , , , , , , , ,	: 175
Tolerance mm : +- (0.60	CRT mm min.	: > 7.00
FULL LOAD DELIVERY AT FUL	LL LOAD STOP	TORQUE CONTROL	
Rated speed rpm : 100 Aneroid pressure hPa : 100 Del. quantity	+	Rated speed rpm rack travel mm Tolerance mm	: 1000 : 10.75 : +- 0.05
cm3/1000 strokes : 14 Tolerance	1.0	Rated speed rpm rack travel mm	: 1150 : 10.75
cm3/1000 strokes : +- Check tolerance cm3/1000s. : +-	4.0	Tolerance man	: +- 0.10
Spreed Tolerance cm3/1000 strokes :	‡		

ANEROID/ALTITUDE COMPENSATOR TEST SETTING 600 Rated speed rpm : Pressure hPa 1000 10.75 rack travel mm : + 0.05Tolerance mm **MEASUREMENT** Pressure hPa Rated speed rpm 600 rack travel mm 9.50 Tolerance mm : + 0.10 600 Rated speed rpm Pressure hPa 260 10.35 rack travel mm : **←** 0.05 Tolerance mm 190 Pressure hPa 9.90 rack travel mm : + 0.10Tolerance mm FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa Rated speed rpm 600 Del. quantity cm3/1000 strokes : 121.0 Tolerance cm3/1000 strokes : \leftarrow 1.0 Check tolerance cm3/1000s. 4.0 **BREAKAWAY** 9.75 Rack travel in mm : Rated speed rpm : 1207 Tolerance 1/min : +- 8

rack travel mm	:	5.40
Tolerance mm	: +-	0.10
Del. quantity		
cm3/1000 strokes	:	16.0
Tolerance		
cm3/1000 strokes	: +-	3.0
Check tolerance		
cm3/1000s.	: +-	6.0
Spreed		
Tolerance		
cm3/1000 strokes	:	8.0
Check tolerance		
cm3/1000s.	:	12.0

LOW IDLE

Rated speed rpm : 275

D01

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 17.03.95 : ISO 4113

Combination No. : 0402648799

Injection pump

Pump designation: PE8P120A320LS7847-2

EP type number : 0412628885

Governor

Governer design. : RQ300/1050PA1030-28

Governer no.

: 0421801778

Cust. part No. : 0260744102

Customer-spec. information Customer : MB-NFZ Motor : 0M442 LA Power KW : 280.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C 40 Tolerance °C 2.0

Overflow valve : 1417413047

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Tolerance l/h: +- 10.0

Test nozzle holde

: 1688901105 assembly

Opening pressure

208.5 bar Tolerance bar

: 1409918004 Lube oil

Test lines : 1680750075

Outside diameter : 8.0

x inside diameter: 3.0

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 5.55 : +- 0.05 Tolerance mm

test only : +- 0.10

Rack travel in mm: 20.50 Tolerance mm : \leftarrow 0.50

Firing order : 8-7-2-6-3

: - 5- 4- 1

Phasing : 0-45-90-135-180

: -225-270-315 Tolerance : +- 0.30

Check

tolerance °NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. :

BASIC SETTING

Rated speed rpm 550

Rack travel in mm: 14.80

Tolerance mm : +- 0.05	+
	Rated speed rpm : 426
Del. quantity cm3/1000 strokes : 239.0	+ guide sleeve + travel mm : 4.29
chis/ 1000 strokes . 237.0	T Cravet (M) : 4.29 + Tolerance mm : +- 0.10
Tolerance	
cm3/1000 strokes : +- 1.0	+ Rated speed rpm : 540
Check tolerance	guide sleeve : 6.00
cm3/1000s. : +- 4.0	+ Tolerance mm : + 0.10
Spreed	+ Rated speed rpm : 1270
Tolerance cm3/1000 strokes : 6.0	→ guide sleeve → travel mm : 11.50
tile/ toda strokes . O.O	Tolerance mm : + 0.50
Check tolerance	+
cm3/1000s. : 9.0	Rated speed rpm : 828
2nd speed rpm : 300	+ guide sleeve + travel mm : 6.38
an speed i pii . Soo	Tolerance mm : +- 0.10
Rack travel in mm : 5.70	+
Tolerance mm : +- 0.30	CUITE OF SELECTION
Del. quantity cm3/1000 strokes : 13.0	GUIDE SLEEVE POSITION
Tolerance	Rated speed rpm : 600
cm3/1000 strokes : +- 3.0	+
Check tolerance	+ Rack travel in mm : 7.00
cm3/1000s. : +- 6.0 Spreed	† Tolerance mm : ← 0.80
Tolerance	
cm3/1000 strokes : 6.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance cm3/1000s. : 10.0	+ Rated speed rpm : 550
CHI37 10003 10.0	+ Rated speed rpm : 550 + Aneroid pressure
	+ hPa : 1200
(B) SETTING OF INJECTION PUMP	+ Del. quantity
WITH GOVERNOR	+ cm3/1000 strokes : 239.0 + Tolerance
GUIDE SLEEVE TRAVEL	+ Check tolerance
Dated and and 300	+ cm3/1000s. : +- 4.0
Rated speed rpm : 300 guide sleeve	+ Spreed + Tolerance
travel mm : 1.94	+ cm3/1000 strokes : 6.0
Tolerance mm : +- 0.10	+ Check tolerance
Rated speed rpm : 1104	† cm3/1000s. : 9.0
guide sleeve	
travel mm : 6.84	RATED SPEED
Tolerance mm : + 0.10	†
Rated speed rpm : 1050	t control lever
guide sleeve	position degree : 99.0
travel mm : 6.50	tolerance degree : +- 4.0
Tolerance mm : +- 0.10	rack travel mm : 13.30
Rated speed rpm : 732	+ Rated speed rpm : 1098
guide sleeve	Tolerance 1/min : + 8
travel mm : 6.13	mode travel and 4 00
Tolerance mm : + 0.10	+ rack travel mm : 4.00

Datad aroud arm	. 1100	,		. 44 75
Rated speed rpm	: 1190	†	rack travel mm	: 11.35
Tolerance 1/min	: +- 15	+	Tolerance mm	: + 0.20
		+		
rack travel mm	: 0.75	1	Rated speed rpm	· 400
Tolerance mm		1	nacca opeca i piii	• 400
Potentiance min	4750	Ť		700
Rated speed rpm	: 1350	+	Pressure hPa	: 300
		+	rack travel mm	: 12.55
			Tolerance mm	: +- 0.20
LOW IDLE		1	10001 01100 11111	
COW IDEC		T	D=====================================	. /50
		T	Pressure nPa	: 450
		+	rack travel mm	: 13.85
control lever		+	Pressure hPa rack travel mm Tolerance mm	: +- 0.15
position degree	: 73.0	1		
tolerance degree	• +- 40	Ĺ		
toterance degree	. ' 4.0	T	OTABE CUE OUT	
		Ť	START CUT-OUT	
Testing:		+		
		+	Rated speed rpm	: > 100
Rated speed rpm	• 300	1	Check	
		<u> </u>		on
rack travel mm Tolerance mm		†	speed 1/min	• / 00
iolerance mm	: ← U.1U	+	Rated speed rpm	: > 220
		+	Check	
rack travel mm	: 2.00	1	speed 1/min	: > 240
Rated speed rom	. /.15		1, m111	V . C10
rack travel mm Rated speed rpm Tolerance 1/min	• 412 • • • • • • • • • • • • • • • • • • •	Ť		
iolerance 1/min	: +- 20	†		
		+	FUEL DELIVERY CHA	ARACTERISTICS
Rated speed rpm	: 200	+		
		<u> 1</u>	Aneroid pressure	
CDT mm min	. \ 7.20	T	hPa	
CRT mm min.	: / /.20	Ť		: 450
		+	Rated speed rpm	: 400
		 +	Del. quantity	
TORQUE CONTROL		1	cm3/1000 strokes	· 198.0
1011402 001111102		1	Tolerance	. 170.0
Data dan sadan sa		T		. 4.5
Rated speed rpm		+	cm3/1000 strokes	: +- 1.5
rack travel mm	: 14.80	+	Check tolerance	
Tolerance mm	: +- 0.05	+	cm3/1000s.	: +- 4.5
		1		
Datad amaged nam	4050	ſ	Amonorid maconing	
Rated speed rpm	: 1000	†	Aneroid pressure	4000
rack travel mm Tolerance mm	: 14.30	+	hPa Rated speed rpm	: 1200
Tolerance mm	: +- 0.10	+	Rated speed rpm	: 1050
		1	Del. quantity	
Rated speed rpm	: 850	1	cm3/1000 strokes	: 217.0
		T		. 211.0
rack travel mm		†	Tolerance	
Tolerance mm	: +- 0.10	+	cm3/1000 strokes	: +- 2.0
		+	Check tolerance	
			cm3/1000s.	: +- 5.0
ANEDOTO / AL TITUDE		T		
ANEROID/ALTITUDE		†	Spreed	
COMPENSATOR TEST		+	Tolerance	
		+	cm3/1000 strokes	: 8.0
		1	Check tolerance	
SETTING		}	cm3/1000s.	: 12.0
SELLTING		T	CIBO/ 10003.	. 12.0
		†		
Rated speed rpm	: 400	+	Aneroid pressure	
Pressure hPa	: 1200	1	hPa	: -
rack travel mm	: 14.80	1	Rated speed rpm	: 500
		T		• 500
Tolerance mm	: ← 0.05	†	Del. quantity	444
		+	cm3/1000 strokes	: 144.0
MEASUREMENT		+	Tolerance	
		Ţ	cm3/1000 strokes	: + 1.0
Descript bo-		7		
Pressure hPa		†	Check tolerance	
Rated speed rpm	: 400	+	cm3/1000s.	: +- 4.0
		·		
507				

Spreed

Tolerance

cm3/1000 strokes :

Check tolerance

cm3/1000s.

12.0

:

8.0

BREAKAWAY

Rack travel in mm :

13.30

Rated speed rpm :

1098

Tolerance 1/min : +-

STARTING FUEL DELIVERY

Rated speed rpm :

100

Del. quantity

cm3/1000 strokes :

210.0

Tolerance

cm3/1000 strokes : \leftarrow 20.0

Check tolerance

cm3/1000s.

: + 24.0

LOW IDLE

Rated speed rpm rack travel mm

300

Tolerance mm

5.70 : ← 0.30

Del. quantity cm3/1000 strokes :

13.0

Tolerance

cm3/1000 strokes : +-3.0

Check tolerance

: + 6.0

cm3/1000s. Spreed

Tolerance

cm3/1000 strokes :

6.0

Check tolerance

cm3/1000s.

10.0

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 22.03.95 Test oil : ISO 4113

Combination No. : 0402648943

Injection pump

Pump designation : PE8P120A720LS7189

: -10

EP type number : 0412628893

Governor

Governer design. : RQV350...1050PA795

: -14

Governer no. : 0421814020

Cust. part No. : 1340518

Customer—spec. information
Customer : SCANIA
Motor : DSC14

TEST BENCH REQUIREMENTS

Test oil inlet

temp. $^{\circ}$ C : $^{\circ}$ C : $^{\leftarrow}$ 2.0

Overflow valve : 1417413025

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Test nozzle holde

assembly : 1688901104

Opening pressure

bar : 251.5 Tolerance bar : +- 1.5

Test lines : 1680750008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

Start-of-delivery setting with ROBO diaphragm.

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 5.05 Tolerance mm : + 0.05

test only : + 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-2-7-3-4 :-5-6-8

Phasing : 0-45-90-135-180 : -225-270-315

Tolerance : \leftarrow 0.30

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm : 12.25
Tolerance mm : + 0.05

Del. quantity +	Spreed
cm3/1000 strokes : 216.0	Tolerance
	cm3/1000 strokes : 8.0
Tolerance	Check tolerance
cm3/1000 strokes : + 1.0 +	cm3/1000s. : 12.0
Check tolerance	
cm3/1000s. : + 4.0	RATED SPEED
Spreed	
Tolerance + cm3/1000 strokes : 8.0 +	control lever
cm3/1000 strokes : 8.0	position degree : 46.0
Check tolerance	control lever
cm3/1000s. : 12.0	position degree : 106.0
T	tolerance degree : +- 4.0
2nd speed rpm : 350	mode through the second of the
Rack travel in mm: 4.60	rack travel mm : 11.20 Rated speed rpm : 1095
Tolerance mm : + 0.30	Tolerance 1/min : +- 5
Del. quantity	
cm3/1000 strokes : 21.0	rack travel mm : 4.00
Tolerance +	Rated speed rpm : 1195
cm3/1000 strokes : + 3.0 + Check tolerance +	Tolerance 1/min : +- 15
cm3/1000s. : + 6.0	rack travel mm : 0.50
Spreed	Tolerance mm : +- 7.50
Tolerance	Rated speed rpm : 1350
cm3/1000 strokes : 4.0	
Check tolerance cm3/1000s. : 8.0	LOW IDLE
LIII 10000	EOW TALE
+	
(B) SETTING OF INJECTION PUMP	control lever
WITH GOVERNOR	position degree : 74.0
Ĭ	tolerance degree : +- 4.0
	control lever
GUIDE SLEEVE POSITION +	position degree : 15.0
+	- ·•
control lever	Testing:
position degree : -1	Rated speed rpm : 350
Rated speed rpm : 1150 +	rack travel mm : 4.60
+	Tolerance mm : + 0.10
Rack travel in mm: 16.50	Dated aread may 250
Tolerance mm : + 1.30	Rated speed rpm : 250
	CRT mm min. : > 7.50
FULL LOAD DELIVERY AT FULL LOAD STOP	
700	CONTENT OF A CONTENT OF THE CONTENT
Rated speed rpm : 700 +	CONTINUOUS-ACTION CONTROL
hPa : -	Rated speed rpm : 325
Del. quantity	······································
cm3/1000 strokes : 216.0	
Tolerance +	TORQUE CONTROL
cm3/1000 strokes : + 1.0	Pated speed nom . 700
Check tolerance cm3/1000s. : +- 4.0	Rated speed rpm : 700 rack travel mm : 12.25
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	

Tolerance mm : +- 0.05 Rated speed rpm 1050 rack travel mm 12.25 Tolerance mm : +- 0.05 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm 500 Pressure hPa 1500 rack travel mm 12.25 Tolerance mm : **←** 0.05 **MEASUREMENT** Pressure hPa Rated speed rpm 500 10.00 rack travel mm Tolerance mm 0.20 500 Rated speed rpm Pressure hPa 525 rack travel mm 11.75 Tolerance mm : + 0.05Pressure hPa 320 . 10.50 rack travel mm Tolerance mm : + 0.20FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa 1050 Rated speed rpm Del. quantity cm3/1000 strokes : 199.0 Tolerance cm3/1000 strokes : +-4.0 Check tolerance cm3/1000s. 6.0 Aneroid pressure hPa Rated speed rpm 500 Del. quantity cm3/1000 strokes : 144.0 Tolerance cm3/1000 strokes : +-1.0

4.0

BREAKAWAY	
Rack travel in mm Rated speed rpm Tolerance 1/min	
STARTING FUEL DEL	IVERY
Rated speed rpm	: 100
rack travel mm	: 10.00
Tolerance mm	: + 0.20
Del. quantity	
cm3/1000 strokes	: 160.0
Tolerance	
cm3/1000 strokes	: +- 20.0
Check tolerance	
cm3/1000s.	: ← 24.0

LOW IDLE		
Rated speed rpm	:	350
rack travel mm	:	4.60
Tolerance mm	: +-	0.30
Del. quantity cm3/1000 strokes Tolerance	:	21.0
cm3/1000 strokes	: +-	3.0
Check tolerance cm3/1000s.	: +-	6.0
Spreed Tolerance		
cm3/1000 strokes Check tolerance	•	4.0

8.0

cm3/1000s.

Check tolerance cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 16.03.95 Edition Test oil : ISO 4113

Combination No. : 0402648947B

Injection pump

Pump designation : PE8P120A320LS7859

EP type number : 0412628869

Governor

Governer design. : RQ300/950PA1032-5

Governer no. : 0421801668

Cust. part No. : 0230749602

Customer-spec. information Customer : MB-NFZ : 0M442 LA Motor Power KW : 320.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C : +- 2.0

Overflow valve : 1417413047

Inlet press. bar : 1.5 Tolerance bar : +- 0.1

Tolerance l/h: +- 10.0

Test nozzle holde

: 1688901105 assembly

Opening pressure

: 208.5 bar : + 1.5 Tolerance bar

Lube oil : 1409918004 Test Lines : 1680750075

Outside diameter : 8.0

x inside diameter: 3.0

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 26.0 Tolerance bar : + 1.0

Prestroke mm : 5.25 Tolerance mm : + 0.05

test only : \leftarrow 0.10

Rack travel in mm: 20.50 : +- 0.50 Tolerance mm

: 8-7-2-6-3 :-5-4-1 Firing order

Phasing : 0-45-90-135-180

: -225-270-315 Tolerance : + 0.30

Check

tolerance "NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 8

BASIC SETTING

Rated speed rpm : 550

Rack travel in mm : 15.00 Tolerance mm : +- 0.05	travel mm : 4.76 Tolerance mm : + 0.10
Del. quantity cm3/1000 strokes : 254.0	Rated speed rpm : 580 guide sleeve travel mm : 6.00
Tolerance cm3/1000 strokes : +- 1.0	Tolerance mm : + 0.10
Check tolerance cm3/1000s. : + 4.0	Rated speed rpm : 1190 guide sleeve travel mm : 11.50 Tolerance mm : + 0.50
Spreed Tolerance cm3/1000 strokes : 6.0	GUIDE SLEEVE POSITION
Check tolerance	Rated speed rpm : 600
cm3/1000s. : 9.0	Rack travel in mm: 20.00
2nd speed rpm : 300	Tolerance mm : + 0.80
Rack travel in mm : 5.20	
Tolerance mm : + 0.30 Del. quantity	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes : 19.0	+ Rated speed rpm : 550
Tolerance cm3/1000 strokes : +- 3.0	+ Aneroid pressure + hPa : 1000
Check tolerance	Del. quantity
cm3/1000s. : +- 6.0	+ cm3/1000 strokes : 254.0
Spreed Tolerance	+ Tolerance + cm3/1000 strokes : +- 1.0
cm3/1000 strokes : 6.0	Check tolerance
Check tolerance	+ cm3/1000s. : +- 4.0
cm3/1000s. : 10.0	+ Spreed + Tolerance
	- cm3/1000 strokes : 6.0
(B) SETTING OF INJECTION PUMP	Check tolerance
WITH GOVERNOR	+ cm3/1000s. : 9.0
GUIDE SLEEVE TRAVEL	RATED SPEED
Rated speed rpm : 300	<u>†</u>
guide sleeve	control lever
travel mm : 1.72	position degree : 97.0
Tolerance mm : +- 0.10	tolerance degree : +- 4.0
Rated speed rpm : 1005 guide sleeve	rack travel mm : 14.00 Rated speed rpm : 998
travel mm : 6.34	+ Tolerance 1/min : + 8
Tolerance mm : + 0.10	+
Rated speed rpm : 950	+ rack travel mm : 4.00 + Rated speed rpm : 1090
guide sleeve travel mm : 6.00	+ Tolerance 1/min : +- 15
Tolerance mm : + 0.10	rack travel mm : 0.75
Pated speed spr 4 /74	+ Tolerance mm : +- 0.75
Rated speed rpm : 476	+ Rated speed rpm : 1200

LOW IDLE	
control lever position degree tolerance degree	: 74.0 : +- 4.0
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 300 : 5.20 : + 0.10
rack travel mm Rated speed rpm Tolerance 1/min	: 2.00 : 435 : + 20
Rated speed rpm	: 200
CRT mm min.	: > 8.00
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	: 550 : 15.00 : ← 0.05
Rated speed rpm rack travel mm Tolerance mm	: 950 : 15.00 : ← 0.05
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 400 : 1000 : 15.00 : + 0.05
MEASUREMENT	
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 400 : 9.10 : +- 0.15
Rated speed rpm	: 400
Pressure hPa rack travel mm Tolerance mm	: 250 : 11.00 : + 0.10
Pressure hPa	: 550

rack travel mm Tolerance mm	: 13.60 : + 0.15
START CUT-OUT	
Rated speed rpm Check	: > 100
speed 1/min Rated speed rpm	: > 80 : > 220
Check speed 1/min	: > 240
FUEL DELIVERY CHA	ARACTERISTICS
Aneroid pressure	: 550
Rated speed rpm Del. quantity	: 400
cm3/1000 strokes Tolerance	: 205.0
cm3/1000 strokes Check tolerance	: + 1.5
cm3/1000s.	: +- 4.5
Aneroid pressure hPa Rated speed rpm	: 1000 : 950
Del. quantity cm3/1000 strokes	
Tolerance cm3/1000 strokes	: ← 2.0
Check tolerance cm3/1000s. Spreed	: + 5.0
Tolerance cm3/1000 strokes	: 8.0
Check tolerance cm3/1000s.	: 12.0
Aneroid pressure	: -
Rated speed rpm Del. quantity	: 500
cm3/1000 strokes Tolerance	: 135.0
cm3/1000 strokes Check tolerance	: + 1.0
cm3/1000s. Spreed	: +- 4.0
Tolerance cm3/1000 strokes Check tolerance	: 8.0
cm3/1000s.	: 12.0
BREAKAWAY	

D11

Rack travel in mm: 14.00 Rated speed rpm : Tolerance 1/min

STARTING FUEL DELIVERY

Rated speed rpm : 100 Del. quantity cm3/1000 strokes :

235.0

Tolerance

cm3/1000 strokes : +- 20.0

Check tolerance

cm3/1000s. : +- 24.0

LOW IDLE

Rated speed rpm 300 5.20 rack travel mm 0.30 Tolerance mm Del. quantity cm3/1000 strokes : 19.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance 6.0 cm3/1000 strokes : Check tolerance cm3/1000s. 10.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 16.03.95 Edition Test oil : ISO 4113

Combination No. : 0402648980

Injection pump

Pump designation : PE8P120A320LS7839

: -10

EP type number : 0412628855

Governor

Governer design. : RQV300...950PA797

: -39

: 0421814115 Governer no.

Cust. part No. : 0250749102

Customer-spec. information Customer : MB-NFZ : 0M442 LA Motor : 370.0

Power KW

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 1417413047

Inlet press. bar : 1.5 Tolerance bar : +-0.1

Tolerance L/h: +- 10.0

Test nozzle holde

: 1688901105 assembly

Opening pressure

208.5 Tolerance bar : +- 1.5

Lube oil : 1409918004 Test lines : 1680750075

Outside diameter : 8.0

x inside diameter: x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 26.0 Tolerance bar : + 1.0

Prestroke mm : 5.05
Tolerance mm : + 0.05

test only : + 0.10

Rack travel in mm: 14.50 Tolerance mm : \leftarrow 0.50

Firing order : 8-7-2-6-3

: - 5- 4- 1

Phasing : 0-45-90-135-180 : -225-270-315

Tolerance : +- 0.30

Check

tolerance °NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 8

BASIC SETTING

550 Rated speed rpm :

D13

Rack travel in m Tolerance mm	m: 15.20 : + 0.05	guide sleeve travel mm : 5.23 Tolerance mm : + 0.25
Del. quantity cm3/1000 strokes	: 289.0	Rated speed rpm : 780 guide sleeve
Tolerance cm3/1000 strokes	: + 1.0	travel mm : 6.31 Tolerance mm : + 0.25
Check tolerance cm3/1000s.	: + 4.0	+ Rated speed rpm : 1092 + guide sleeve + travel mm : 10.00
Spreed		Tolerance mm : + 0.25
Tolerance cm3/1000 strokes	: 6.0	Rated speed rpm : 1190 guide sleeve travel mm : 11.50
Check tolerance cm3/1000s.	: 9.0	Tolerance mm : + 0.50
2nd speed rpm	: 300	GUIDE SLEEVE POSITION
Rack travel in mo Tolerance mm	n: 5.20 :+- 0.30	control lever
Del. quantity cm3/1000 strokes	: 19.0	position degree : - 1 Rated speed rpm : 1030
Tolerance cm3/1000 strokes	: ← 3.0	Rack travel in mm: 14.20
Check tolerance cm3/1000S. Spreed	: + 6.0	+ Tolerance mm : + 1.30
		T
Tolerance	: 6.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance cm3/1000 strokes Check tolerance		Rated speed rpm : 550
Tolerance cm3/1000 strokes		Rated speed rpm : 550 Aneroid pressure hPa : 1200
Tolerance cm3/1000 strokes Check tolerance	: 10.0	Rated speed rpm : 550 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 289.0 Tolerance
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. (B) SETTING OF IN WITH GOVERNOR	: 10.0 NJECTION PUMP	Rated speed rpm : 550 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 289.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. (B) SETTING OF IN WITH GOVERNOR GUIDE SLEEVE TRAV	: 10.0 NJECTION PUMP	Rated speed rpm : 550 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 289.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. (B) SETTING OF IN WITH GOVERNOR GUIDE SLEEVE TRAV Rated speed rpm guide sleeve	: 10.0 NJECTION PUMP VEL : 300	Rated speed rpm : 550 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 289.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 6.0
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. (B) SETTING OF IN WITH GOVERNOR GUIDE SLEEVE TRAV Rated speed rpm	: 10.0 NJECTION PUMP	Rated speed rpm : 550 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 289.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. (B) SETTING OF IN WITH GOVERNOR GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm	: 10.0 NJECTION PUMP /EL : 300 : 1.29 : + 0.20	Rated speed rpm : 550 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 289.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000 strokes : 9.0
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. (B) SETTING OF IN WITH GOVERNOR GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm	: 10.0 NJECTION PUMP /EL : 300 : 1.29 : + 0.20	Rated speed rpm : 550 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 289.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. (B) SETTING OF IN WITH GOVERNOR GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm Rated speed rpm Rated speed rpm Rated speed rpm	: 10.0 NJECTION PUMP /EL : 300 : 1.29 : + 0.20 : 1010 : 8.56	Rated speed rpm : 550 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 289.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever position degree : 121.0
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. (B) SETTING OF IN WITH GOVERNOR GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 10.0 NJECTION PUMP /EL : 300 : 1.29 : + 0.20 : 1010 : 8.56 : + 0.15 : 567 : 4.66	Rated speed rpm : 550 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 289.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever position degree : 121.0 tolerance degree : + 4.0
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. (B) SETTING OF IN WITH GOVERNOR GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 10.0 NJECTION PUMP /EL : 300 : 1.29 : + 0.20 : 1010 : 8.56 : + 0.15 : 567 : 4.66 : + 0.25	Rated speed rpm : 550 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 289.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever position degree : 121.0

rack travel mm Rated speed rpm Tolerance 1/min rack travel mm Tolerance mm Rated speed rpm	: 1095 : + 15 : 0.75 : + 0.75	Pressure hPa : - Rated speed rpm : 400 rack travel mm : 8.25 Tolerance mm : + 0.15 Rated speed rpm : 400 Pressure hPa : 300 rack travel mm : 9.95
LOW IDLE	-	Tolerance mm : +- 0.20 Pressure hPa : 500
control lever position degree tolerance degree	: 82.0 : + 4.0	rack travel mm : 11.65 Tolerance mm : + 0.20
Testing:	-	START CUT-OUT
Rated speed rpm rack travel mm Tolerance mm	: 300 : 5.20 : + 0.10	Rated speed rpm : > 190 Check speed 1/min : > 170 Rated speed rpm : < 220
Rated speed rpm CRT mm min.	-	Check : < 240
CONTINUOUS-ACTION	N CONTROL	FUEL DELIVERY CHARACTER `TICS
Rated speed rpm	-	Aneroid pressure hPa : 500 Rated speed rpm : 400
TORQUE CONTROL		- Del. quantity - cm3/1000 strokes : 196.0 - Tolerance
Rated speed rpm rack travel mm Tolerance mm	: 15.20 	- cm3/1000 strokes : + 1.5 - Check tolerance - cm3/1000s. : + 4.5
Rated speed rpm rack travel mm Tolerance mm	: 15.20	- Aneroid pressure - hPa : 1200 - Rated speed rpm : 750 - Del. quantity
Rated speed rpm rack travel mm	: 950 : 15.20	- bet. quantity - cm3/1000 strokes : 274.5 - Tolerance
Tolerance mm	: +- 0.10	- cm3/1000 strokes : +- 3.0 - Check tolerance
ANEROID/ALTITUDE COMPENSATOR TEST		- cm3/1000s. : +- 6.0 - Aneroid pressure - hPa : 1200
SETTING	‡	Rated speed rpm : 950 Del. quantity
Rated speed rpm	: 400 : 1200	cm3/1000 strokes : 271.0 Tolerance cm3/1000 strokes : +- 3.0
Pressure hPa rack travel mm Tolerance mm	: 15.20 	cm3/1000 strokes : +- 3.0 Check tolerance cm3/1000s. : +- 6.0
MEASUREMENT		Aneroid pressure hPa : -

Rated speed rpm 500 Del. quantity cm3/1000 strokes : 136.0 Tolerance cm3/1000 strokes : +-1.0 Check tolerance cm3/1000s. 4.0 Spreed Tolerance cm3/1000 strokes 8.0 Check tolerance cm3/1000s. 12.0 **BREAKAWAY** Rack travel in mm: 14.20 Rated speed rpm : Tolerance 1/min : + STARTING FUEL DELIVERY Rated speed rpm 100 Del. quantity cm3/1000 strokes : 255.0 Tolerance cm3/1000 strokes : +- 20.0Check tolerance cm3/1000s. : +- 24.0 LOW IDLE Rated speed rpm 300 5.20 rack travel mm Tolerance mm 0.30 Del. quantity cm3/1000 strokes : 19.0 Tolerance cm3/1000 strokes 3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance 10.0 cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 16.03.95 Test oil : ISO 4113

Combination No. : 0402648981

Injection pump

Pump designation : PE8P120A320LS7839

: -10

EP type number : 0412628855

Governor

Governer design. : RQ300/950PA971-10

Governer no. : 0421801754

Cust. part No. : 0250749002

Customer—spec. information Customer : MB-NFZ Motor : 0M442 LA Power KW : 370.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1417413047

Inlet press. bar : 1.5
Tolerance bar : + 0.1

Tolerance l/h: + 10.0

Test nozzle holde

assembly : 1688901105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Lube oil : 1409918004

Test lines : 1680750075

Outside diameter : 8.0

x inside diameter: 3.0

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 5.05 Tolerance mm : + 0.05

test only : + 0.10

Rack travel in mm : 14.50 Tolerance mm : + 0.50

Firing order : 8-7-2-6-3

: - 5- 4- 1

Phasing : 0-45-90-135-180

: -225-270-315 Tolerance : + 0.30

Check

tolerance °NW : +- 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 8

BASIC SETTING

Rated speed rpm : 550

Rack travel in mm: 15.20

Tolerance mm : +- 0.05	+
	Rated speed rpm : 580
Del. quantity cm3/1000 strokes : 289.0	guide sleeve
Chis/ todo strokes : 209.0	+ travel mm : 6.00 + Tolerance mm : + 0.10
Tolerance	- Total disc limit
cm3/1000 strokes : $+-$ 1.0	Rated speed rpm : 1190
	+ guide sleeve
Check tolerance cm3/1000s. : +- 4.0	travel mm : 11.50
CIID/ 10005 4.0	Tolerance mm : + 0.50
Spreed	
Tolerance	+ GUIDE SLEEVE POSITION
cm3/1000 strokes : 6.0	Detect around number (00)
Check tolerance	Rated speed rpm : 600
cm3/1000s. : 9.0	Rack travel in mm: 20.00
	+ Tolerance mm : + 0.80
2nd speed rpm : 300	+
Rack travel in mm : 5.20	+ FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance mm : + 0.30	FOLL LOAD DECIVERY AT FULL LOAD STOP
Del. quantity	+ Rated speed rpm : 550
cm3/1000 strokes : 19.0	+ Aneroid pressure
Tolerance cm3/1000 strokes : +- 3.0	+ hPa : 1200
cm3/1000 strokes : +- 3.0 Check tolerance	t Del. quantity cm3/1000 strokes : `9.0
cm3/1000s. : +- 6.0	Tolerance
Spreed	+ cm3/1000 strokes : + 1.0
Tolerance	+ Check tolerance
cm3/1000 strokes : 6.0	+ cm3/1000s. : + 4.0
Check tolerance cm3/1000s. : 10.0	+ Spreed + Tolerance
. 10.0	+ cm3/1000 strokes : 6.0
	+ Check tolerance
(B) SETTING OF INJECTION PUMP	+ cm3/1000s. : 9.0
WITH GOVERNOR	<u> </u>
	RATED SPEED
GUIDE SLEEVE TRAVEL	100020
	+
Rated speed rpm : 300	t control lever
guide sleeve travel mm : 2.25	<pre>position degree : 102.0 tolerance degree : +- 4.0</pre>
Tolerance mm : +- 0.10	toterance degree 4.0
	rack travel mm : 14.20
Rated speed rpm : 1005	Rated speed rpm : 998
guide sleeve travel mm : 6.33	Tolerance 1/min : + 5
Tolerance mm : + 0.10	Track travel mm : 4.00
Total diloc limit	Rated speed rpm : 1105
Rated speed rpm : 950	Tolerance 1/min : + 15
guide sleeve	† 0.75
travel mm : 6.00 Tolerance mm : + 0.10	+ rack travel mm : 0.75 + Tolerance mm : +- 0.75
. r= U.IU	Rated speed rpm : 1250
Rated speed rpm : 450	The second secon
guide sleeve	
travel mm : 4.72	+ LOW IDLE
Tolerance mm : \leftarrow 0.10	†

control lever position degree tolerance degree	: 76.0 : + 4.0	† † †	rack travel mm Tolerance mm	
Testing:		‡	START CUT-OUT	
Rated speed rpm	: 300	‡	Rated speed rpm Check	: > 100
rack travel mm	: 5.20	1	speed 1/min	: > 80
rack travel mm Tolerance mm	: ← 0.10	+	Rated speed rpm	
rack travel mm	: 2.00	İ	Check speed 1/min	: < 240
Rated speed rom	: 425	1	opeca min	
Rated speed rpm Tolerance 1/min	: +- 20	1		
		+	FUEL DELIVERY CHA	ARACTERISTICS
Rated speed rpm	: 200	†	Amanadal anasayını	
CRT mm min.	. > 7.20	†	Aneroid pressure hPa	. 500
CKI MII MIII.	. > 1.20	I	Rated speed rpm	: 500 : 400
			Del. quantity	• 400
TORQUE CONTROL		1	cm3/1000 strokes	: 196.0
		+	Tolerance	
Rated speed rpm	: 550	+	cm3/1000 strokes	
rack travel mm	: 15.20	+	Check tolerance	
Tolerance mm	: +- 0.05	+	cm3/1000S.	: +- 4.5
Pated speed rom	• 750	Ť	Aneroid pressure	
rack travel mm	15.20	I	hPa	: 1200
Rated speed rpm rack travel mm Tolerance mm	: +- 0.05	1	Rated speed rpm	: 750
		1	Del. quantity	, , ,
Rated speed rpm	: 950	+	cm3/1000 strokes	: 274.5
rack travel mm	: 15.20	+	Tolerance	
Tolerance mm	: ← 0.10	+	cm3/1000 strokes	: + 3.0
		†	Check tolerance	
ANEROID/ALTITUDE		<u> </u>	cm3/1000s.	: +- 6.0
COMPENSATOR TEST		I	Aneroid pressure	
TOTAL CONTROL TEST		1	hPa	: 1200
		1	Rated speed rpm	
SETTING		+	Del. quantity	
	400	+	cm3/1000 strokes	: 271.0
Rated speed rpm	: 400	†	Tolerance	
Pressure hPa rack travel mm	: 1200 : 15.20	†	cm3/1000 strokes Check tolerance	: + 3.0
Tolerance mm	: + 0.05	I	cm3/1000s.	: + 6.0
rocci di loc likil	0.05	1	CIID7 10000.	0.0
MEASUREMENT		+	Aneroid pressure	
		+	hPa	-
Pressure hPa	: -	+	Rated speed rpm	: 500
Rated speed rpm	: 400	†	Del. quantity	47/ 0
rack travel mm Tolerance mm	: 8.25 : + 0.15	Ť	cm3/1000 strokes Tolerance	: 136.0
TOTEL BLICE IIII)	. 1- 0.15	I	cm3/1000 strokes	: + 1.0
Rated speed rpm	: 400	I	Check tolerance	
opcour (pill		1	cm3/1000s.	: + 4.0
Pressure hPa	: 300	1	Spreed	, - 2
rack travel mm	9.95	+	Tolerance	
Tolerance mm	: +- 0.20	+	cm3/1000 strokes	: 8.0
Dunning LD-	. 500	†	Check tolerance	. 42.0
Pressure hPa	: 500	†	cm3/1000s.	: 12.0

BREAKAWAY

Rack travel in mm: 14.20 Rated speed rpm: 998 Tolerance 1/min: +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 255.0 Tolerance

cm3/1000 strokes : \leftarrow 20.0

Check tolerance

cm3/1000s. : +- 24.0

LOW IDLE

Rated speed rpm 300 rack travel mm 5.20 Tolerance mm 0.30 Del. quantity cm3/1000 strokes : 19.0 Tolerance cm3/1000 strokes 3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes 6.0 Check tolerance cm3/1000s. 10.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 17.03.95 Edition Test oil : ISO 4113

Combination No. : 0402648982

Injection pump

Pump designation : PE8P12OA320LS7884

EP type number : 0412628900

Governor

Governer design. : RQV350...1200PA1197

Governer no. : 0421814116

Cust. part No. : 0250744102

Customer-spec. information

Customer : MTU : 8V-183-03 Motor

Power KW : 564.0

TEST BENCH REQUIREMENTS

Test oil inlet

: 40 : + 2.0 temp. °C Tolerance °C

Overflow valve : 1417413025

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Tolerance l/h: + 10.0

Test nozzle holde

: 1688901105 assembly

Opening pressure

208.5 bar Tolerance bar : +- 1.5

Lube oil : 1409918004 Test lines : 1680750075

Outside diameter : 8.0

x inside diameter: 3.0

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar: 26.0 Tolerance bar : \leftarrow 1.0

Prestroke mm : '.05
Tolerance mm : ← 0.05

test only : + 0.10

Rack travel in mm: 20.50 Tolerance mm : **←** 0.50

Firing order : 8-7-2-6-3 :-5-4-1

: 0-45-90-135-180 Phasing : -225-270-315

: +- 0.30 Tolerance

Check

tolerance °NW : +- 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 8

BASIC SETTING

Rated speed rpm : 600

Rack travel in mm: 9.50 Tolerance mm : +- 0.05

	Batad aread pro . /F7
Del. quantity	+ Rated speed rpm : 457 + guide sleeve
cm3/1000 strokes : 260.5	travel mm : 3.13
	+ Tolerance mm : + 0.25
Tolerance	+
cm3/1000 strokes : +- 1.0	+ Rated speed rpm : 610
Check tolerance	+ guide sleeve + travel mm : 3.65
cm3/1000s. : +- 4.0	+ Tolerance mm : + 0.25
**************************************	+ voter unite num
Spreed	Rated speed rpm : 1360
Tolerance	+ guide sleeve
cm3/1000 strokes : 8.0	travel mm : 10.00 Tolerance mm : +- 0.25
Check tolerance	† Tolerance mm : +- 0.25
cm3/1000s. : 12.0	Rated speed rpm : 1470
	+ guide sleeve
2nd speed rpm : 350	+ travel mm : 11.50
Dook Annual du no 200	+ Tolerance mm : + 0.50
Rack travel in mm : 3.80 Tolerance mm : + 0.30	<u> </u>
Del. quantity	GUIDE SLEEVE POSITION
cm3/1000 strokes : 15.0	1
Tolerance	+
cm3/1000 strokes : + 3.0	+ control lever
Check tolerance cm3/1000s. : +- 6.0	+ position degree : - 1 + Rated speed rpm : 1 79
Spreed	T Rated speed (pill : 1 5
Tolerance	Rack travel in mm: 13.00
cm3/1000 strokes : 8.0	→ Tolerance mm : ← 1.30
Check tolerance	+
cm3/1000s. : 12.0	FULL LOAD DELIVERY AT FULL LOAD STOP
	T FOLL LOAD DELIVERY AT FOLL LOAD STOP
(B) SETTING OF INJECTION PUMP	+ Rated speed rpm : 600
WITH GOVERNOR	+ Aneroid pressure
	+ hPa : 650
GUIDE SLEEVE TRAVEL	+ Del. quantity + cm3/1000 strokes : 260.5
GOIDE OFFIAE LIMAGE	Tolerance
Rated speed rpm : 350	+ cm3/1000 strokes : + 1.0
guide sleeve	+ Check tolerance
travel mm : 1.53	+ cm3/1000s. : + 4.0
Tolerance mm : + 0.20	+ Spreed + Tolerance
Rated speed rpm : 1255	+ cm3/1000 strokes : 8.0
guide sleeve	+ Check tolerance
travel mm : 8.31	+ cm3/1000s. : 12.0
Tolerance mm : + 0.15	†
Rated speed rpm : 1000	RATED SPEED
Rated speed rpm : 1000 guide sleeve	T MIED OFEED
travel mm : 5.83	+
Tolerance mm : +- 0.25	control lever
Detect award non- 107	+ position degree : 120.0
Rated speed rpm : 407 guide sleeve	tolerance degree : + 4.0
	+ rack travel mm : 12.70
travel mm : 2.57 Tolerance mm : + 0.25	rack travel mm : 12.70 Rated speed rpm : 1245

rack travel mm : 4.00 Rated speed rpm : 1345 Tolerance 1/min : + 15	Pressure hPa : 500 rack travel mm : 9.00 Tolerance mm : +- 0.05
rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1450	Pressure hPa : 250 rack travel mm : 7.30 Tolerance mm : +- 0.10
	Pressure hPa : 1600 rack travel mm : 13.00
LOW IDLE	Tolerance mm : +- 0.05
control lever position degree : 64.0 tolerance degree : + 4.0	Pressure hPa : 1000 rack travel mm : 10.55 Tolerance mm : + 0.10
Testing:	START CUT-OUT
Rated speed rpm : 350 rack travel mm : 3.80 Tolerance mm : + 0.10	Rated speed rpm : > 260 Check speed 1/min : > 240
Rated speed rpm : 250	Rated speed rpm : < 270 Check
CRT mm min. :> 5.30	speed 1/min : < 290
CONTINUOUS-ACTION CONTROL	FUEL DELIVERY CHARACTERISTICS
CONTENED NOTEDIA CONTINUE	Aneroid pressure
Rated speed rpm : 450	hPa : 2000 Rated speed rpm : 1200 Del. quantity
TORQUE CONTROL	cm3/1000 strokes : 334.0
Rated speed rpm : 600 rack travel mm : 9.50 Tolerance mm : + 0.05	cm3/1000 strokes : + 1.5 Check tolerance
	+ cm3/1000s. : + 4.5 + Spreed
Rated speed rpm : 1200 rack travel mm : 13.75 Tolerance mm : + 0.10	Tolerance cm3/1000 strokes : 10.0 Check tolerance
Rated speed rpm : 750	cm3/1000s. : 14.0
rack travel mm : 13.75 Tolerance mm : + 0.10	Aneroid pressure hPa : 2000 Rated speed rpm : 750
ANEROID/ALTITUDE COMPENSATOR TEST	Del. quantity cm3/1000 strokes : 389.5 Tolerance
	+ cm3/1000 strokes : + 4.0 + Check tolerance
MEASUREMENT	cm3/1000s. : + 7.0
Pressure hPa : -	+ Aneroid pressure + hPa : -
Rated speed rpm : 500 rack travel mm : 6.00	+ Rated speed rpm : 500 + Del. quantity
Tolerance mm : + 0.15	cm3/1000 strokes : 127.0
	•

Tolerance cm3/1000 strokes : +-1.0 Check tolerance cm3/1000s. 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. 12.0 **BREAKAWAY** 12.70 Rack travel in mm: Rated speed rpm : 1245 Tolerance 1/min : + STARTING FUEL DELIVERY Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 415.0 Tolerance cm3/1000 strokes : + 20.0 Check tolerance cm3/1000s. : +- 24.0 LOW IDLE Rated speed rpm 350 3.80 rack travel mm Tolerance mm : +- 0.30 Del. quantity 15.0 cm3/1000 strokes : Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. : +-6.0 Spreed Tolerance 8.0 cm3/1000 strokes : Check tolerance cm3/1000s. 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 16.03.95 Edition : ISO 4113 Test oil

Combination No. : 0402648983

Injection pump

Pump designation : PE8P120A320LS7839

: -10

EP type number : 0412628855

Governor

Governer design. : RQ300/950PA993-9

: 0421801755 Governer no.

Cust. part No. : 0250749202

Customer-spec. information : MB-NFZ Customer Motor : 0M442 LA Power KW : 370.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 1417413047

1.5 Inlet press. bar : Tolerance bar : +- 0.1

Tolerance l/h: +- 10.0

Test nozzle holde

: 1688901105 assembly

Opening pressure

208.5 Tolerance bar : + 1.5

: 1409918004 Lube oil

Test lines : 1680750075

Outside diameter : 8.0

x inside diameter: 3.0

: 1000 x length mm

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +-1.0

Prestroke mm 5.05 : + 0.05Tolerance mm

test only : **←** 0.10

Rack travel in mm: 14.50 Tolerance mm : \leftarrow 0.50

: 8-7-2-6-3 Firing order

: - 5- 4- 1

Phasing : 0-45-90-135-180

: -225-270-315 : +- 0.30

Tolerance Check

tolerance *NW : +- 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 8

BASIC SETTING

Rated speed rpm : 550

Rack travel in mm: 15.20

Tolerance mm : + 0.05 +	
Del. quantity	Rated speed rpm : 500 guide sleeve
cm3/1000 strokes : 289.0	travel mm : 6.00
Tolerance	Tolerance mm : +- 0.10
cm3/1000 strokes : + 1.0	Rated speed rpm : 1170
Check tolerance	guide sleeve travel mm : 11.50
cm3/1000s. : +- 4.0	Tolerance mm : + 0.50
Spreed	
Tolerance + cm3/1000 strokes : 6.0	GUIDE SLEEVE POSITION
Check tolerance	Rated speed rpm : 600
cm3/1000s. : 9.0	Rack travel in mm : 20.00
2nd speed rpm : 300	Tolerance mm : +- 0.80
+	
Rack travel in mm: 5.20 + Tolerance mm: + 0.30 +	FULL LOAD DELIVERY AT FULL LOAD STOP
Del. quantity	Rated speed rpm : 550
cm3/1000 strokes : 19.0 + Tolerance	Aneroid pressure hPa : 1200
cm3/1000 strokes : +- 3.0	Del. quantity
Check tolerance +	cm3/1000 strokes : `9.0
cm3/1000s. : + 6.0	Tolerance
Spreed + Tolerance +	cm3/1000 strokes : +- 1.0 Check tolerance
cm3/1000 strokes : 6.0	cm3/1000s. : +- 4.0
Check tolerance	Spreed
cm3/1000s. : 10.0 +	Tolerance
Ī	cm3/1000 strokes : 6.0 Check tolerance
(B) SETTING OF INJECTION PUMP	cm3/1000s. : 9.0
WITH GOVERNOR	
<u> </u>	RATED SPEED
GUIDE SLEEVE TRAVEL	NATED OF CED
Rated speed rpm : 300	control lever
Rated speed rpm : 300 + guide sleeve +	position degree : 98.0
travel mm : 2.14	tolerance degree : +- 4.0
Tolerance mm : \leftarrow 0.10	made durated may 4/ 20
Rated speed rpm : 1005	rack travel mm : 14.20 Rated speed rpm : 998
guide sleeve	Tolerance 1/min : +- 5
travel mm : 6.34	
Tolerance mm : \leftarrow 0.10	rack travel mm : 4.00 Rated speed rpm : 1085
Rated speed rpm : 950	Tolerance 1/min : + 15
guide sleeve	0.75
travel mm : 6.00 + Tolerance mm : + 0.10	rack travel mm : 0.75 Tolerance mm : + 0.75
Total disce likil	Rated speed rpm : 1250
Rated speed rpm : 399	
guide steeve + travel mm : 4.46 +	LOW IDLE
Tolerance mm : + 0.10	CAN INCE
'	

control lever	: 71.0	rack travel mm Tolerance mm	: 11.65 : +- 0.20
tolerance degree	4.U	START CUT-OUT	
Testing:		+ Rated speed rpm	; > 100
Rated speed rpm	: 300	+ Check	
rack travel mm Tolerance mm	: +- 0.10	speed 1/min Rated speed rpm	: > 00 : < 220
		+ Check + speed 1/min	
rack travel mm Rated speed rpm	340	T Speed 17/1/11	. \ 240
Tolerance 1/min	: ← 20	FUEL DELIVERY CH	ARACTERISTICS
Rated speed rpm	: 200	+	
CRT mm min.	: > 5.70	+ Aneroid pressure + hPa	: 500
	·	Rated speed rpm Del. quantity	: 400
TORQUE CONTROL		+ cm3/1000 strokes	: 196.0
Rated speed rpm	: 550	+ Tolerance + cm3/1000 strokes	: +- 1.5
rack travel mm Tolerance mm	: 15.20	Check tolerance cm3/1000s.	
		+	
Rated speed rpm rack travel mm	: 750 : 15,20	+ Aneroid pressure	
rack travel mm Tolerance mm	: +- 0.05	+ hPa + Rated speed rpm	750
Rated speed rpm	: 950	+ Del. quantity + cm3/1000 strokes	: 274.5
rack travel mm Tolerance mm		+ Tolerance + cm3/1000 strokes	
rocer arice mail	0.10	+ Check tolerance	
ANEROID/ALTITUDE		- cm3/1000s.	: +- 6.0
COMPENSATOR TEST		Aneroid pressure	: 1200
		+ Rated speed rpm	: 950
SETTING		+ Del. quantity + cm3/1000 strokes	
Rated speed rpm	: 400	+ Tolerance	
Pressure hPa rack travel mm	: 15.20	cm3/1000 strokes Check tolerance	: +- 3.0
Tolerance mm	: +- 0.05	cm3/1000s.	: +- 6.0
MEASUREMENT		Aneroid pressure	
Pressure hPa	: -	+ hPa + Rated speed rpm	500
Rated speed rpm		+ Del. quantity + cm3/1000 strokes	• 136.0
rack travel mm Tolerance mm	: +- 0.15	+ Tolerance	
Rated speed rpm	: 400	cm3/1000 strokes Check tolerance	
Pressure hPa		- cm3/1000s. - Spreed	: +- 4.0
rack travel mm	: 9.95	+ Tolerance	0.0
Tolerance mm	: +- 0.20	cm3/1000 strokes Check tolerance	
Pressure hPa	: 500	+ cm3/1000s.	: 12.0

BREAKAWAY

Rack travel in mm: 14.20 Rated speed rpm Tolerance 1/min

STARTING FUEL DELIVERY

Rated speed rpm 100 Del. quantity cm3/1000 strokes :

255.0

Tolerance

cm3/1000 strokes : + 20.0

Check tolerance

cm3/1000s.: + 24.0

LOW IDLE

300 Rated speed rpm 5.20 rack travel mm 0.30 Tolerance mm Del. quantity cm3/1000 strokes : 19.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance 6.0

cm3/1000 strokes :

Check tolerance

cm3/1000s. 10.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 16.03.95 : ISO 4113

Combination No. : 0402648984

Injection pump

Pump designation : PE8P120A320LS7839

: -10

EP type number

: 0412628855

Governor

Governer design. : RQ300/1050PA972-12

Governer no. : 0421801759

Cust. part No. : 0250749302

Customer-spec. information Customer : MB-NFZ Motor : 0M442 LA Power KW : 370.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C 40 Tolerance °C 2.0

Overflow valve : 1417413047

1.5 Inlet press. bar : Tolerance bar 0.1

: +- 10.0 Tolerance l/h

Test nozzle holde

: 1688901105 assembly

Opening pressure

208.5 bar Tolerance bar : +- 1.5

: 1409918004 Lube oil

Test Lines : 1680750075

Outside diameter : 8.0

x inside diameter: 3.0

x Length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm 5.05 Tolerance mm : + 0.05

test only : + 0.10

Rack travel in mm: 14.50 Tolerance mm : \leftarrow 0.50

: 8-7-2-6-3 :-5-4-1 Firing order

Phasing : 0-45-90-135-180

: -225-270-315

Tolerance : + - 0.30

Check

tolerance *NW : +- 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 8

BASIC SETTING

Rated speed rpm : 550

Rack travel in mm : 15.20

Tolerance mm : + 0.05 +	
+	Rated speed rpm : 570
Del. quantity +	guide sleeve
cm3/1000 strokes : 289.0	travel mm : 6.00 Tolerance mm : +- 0.10
Tolerance	Toterance man . To U. (U
cm3/1000 strokes : + 1.0	Rated speed rpm : 1280
	guide sleeve
Check tolerance + 4.0 +	travel mm : 11.50
tilis/1000s. : +- 4.0	Tolerance mm : +- 0.50
Spreed	
Tolerance	GUIDE SLEEVE POSITION
cm3/1000 strokes : 6.0	Patad award man . (80
Check tolerance	Rated speed rpm : 600
cm3/1000s. : 9.0	Rack travel in mm : 20.00
+	Tolerance mm : + 0.80
2nd speed rpm : 300	
Rack travel in mm: 5.20	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance mm : + 0.30	TOLL LOND DELIVERY AT TOLL LOND OTO
Del. quantity +	Rated speed rpm : 550
cm3/1000 strokes : 19.0	Aneroid pressure
Tolerance + 3.0 +	hPa : 1200 Del. quantity
Check tolerance	cm3/1000 strokes : 79.0
cm3/1000s. : +- 6.0 \downarrow	Tolerance
Spreed	cm3/1000 strokes : + 1.0
Tolerance + cm3/1000 strokes : 6.0 +	Check tolerance cm3/1000s. : +- 4.0
Check tolerance	Spreed 4.0
cm3/1000s. : 10.0	Tolerance
+	cm3/1000 strokes : 6.0
(B) SETTING OF INJECTION PUMP +	Check tolerance cm3/1000s. : 9.0
WITH GOVERNOR	cm3/1000s. : 9.0
+	
	RATED SPEED
GUIDE SLEEVE TRAVEL	
Rated speed rpm : 300	control lever
guide sleeve	position degree : 98.0
travel mm : 1.94 +	tolerance degree : +- 4.0
Tolerance mm : + 0.10	rack travel mm : 14.20
Rated speed rpm : 1104	Rated speed rpm : 1098
guide sleeve	Tolerance 1/min : + 5
travel mm : 6.34 +	
Tolerance mm : ÷ 0.10	rack travel mm : 4.00 Rated speed rpm : 1195
Rated speed rpm : 1050	Rated speed rpm : 1195 Tolerance 1/min : +- 15
guide sleeve	
travel mm : 6.00 +	rack travel mm : 0.75
Tolerance mm : + 0.10	Tolerance mm : +- 0.75
Reted speed rpm : 414	Rated speed rpm : 1350
guide sleeve	
travel mm : 4.51	LOW IDLE
Tolerance mm : + 0.10 +	

control lever position degree tolerance degree		rack travel mm Tolerance mm	
Testing:	• • •••	START CUT-OUT	
Rated speed rpm	• 300	Rated speed rpm Check	: > 190
rack travel mm	• 5 20	speed 1/min	: > 170
rack travel mm Tolerance mm	. 5.20	Rated speed rpm	. / 220
roterance nm	: +- 0.10	rated speed rpm	: < 220
rack travel mm	: 2.00	+ Check	2/0
		+ speed 1/min	: < 240
Rated speed rpm	: 405	†	
Tolerance 1/min	: +- 20		
Rated speed rpm	: 200	+ FUEL DELIVERY CHA	ARACTERISTICS
		+ Aneroid pressure	
CRT mm min.	: > 8.20	+ hPa	: 500
		Rated speed rpm	
		Del. quantity	. 400
TORQUE CONTROL		cm3/1000 strokes	• 106.0
TOTAGE CONTROL		+ Tolerance	, 170.0
Rated speed rpm	• 550	cm3/1000 strokes	15
rack travel mm	. 15 20	Check tolerance	
Tolerance mm		+ cm3/1000s.	
roterance mm	: - 0.05	T cms/ roots.	: + 4.5
Rated speed rpm	: 750	+ Aneroid pressure	
rack travel mm	: 15.20	+ hPa	: 1200
Tolerance mm	: +- 0.05	+ Rated speed rpm	
		+ Del. quantity	
Rated speed rpm	: 1050	+ cm3/1000 strokes	• 274.5
rack travel mm	15 20	+ Tolerance	. 214,5
rack travel mm Tolerance mm	· + 0.10	+ cm3/1000 strokes	• + 3.0
TOCCI GITICE HAIT	0.10	+ Check tolerance	
		cm3/1000s.	
ANEROID/ALTITUDE		I (115) 10003.	5.6
COMPENSATOR TEST		Aneroid pressure	
COMPERSATOR TEST		+ hPa	: 1200
CETTALC		- Rated speed rpm	
SETTING		+ Del. quantity	
	400	+ cm3/1000 strokes	: 269.0
Rated speed rpm	: 400	+ Tolerance	
Pressure hPa	: 1200 : 15.20	+ cm3/1000 strokes	
rack travel mm	: 15.20	+ Check tolerance	
Tolerance mm	: +- 0.05	+ cm3/1000s.	: +- 6.0
MEACUIDEMENT		† Amanaid announce	
MEASUREMENT		+ Aneroid pressure	
D		+ hPa	500
Pressure hPa	: -	Rated speed rpm	: 500
Rated speed rpm		+ Del. quantity	
rack travel mm Tolerance mm	: 8.25	+ cm3/1000 strokes	: 136.0
Tolerance mm	: + 0.15	+ Tolerance	
		cm3/1000 strokes	: ← 1.0
Rated speed rpm	: 400	+ Check tolerance	
		+ cm3/1000s.	: ← 4.0
Pressure hPa		+ Spreed	
rack travel mm	: 9.95	Tolerance	
Tolerance mm	: - 0.20	+ cm3/1000 strokes	: 8.0
		+ Check tolerance	
Pressure hPa	: 500	+ cm3/1000s.	: 12.0
: = = = :: =	- -		

BREAKAWAY

Rack travel in mm : 14.20 Rated speed rpm : 1098 Tolerance 1/min : + 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 Del, quantity

cm3/1000 strokes : 255.0

Tolerance

cm3/1000 strokes : +- 20.0

Check tolerance

Check tolerance cm3/1000s.

cm3/1000s. : +- 24.0

LOW IDLE

300 Rated speed rpm rack travel mm 5.20 0.30 Tolerance mm Del. quantity cm3/1000 strokes 19.0 Tolerance cm3/1000 strokes 3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes 6.0

10.0

Note remarks

Refer to Service Info for test and adjustment instructions.

See microcard(s) W400/...

: 16.03.95 Edition Test oil : ISO 4113

Combination No. : 0402648985

Injection pump

Pump designation : PE8P120A320LS7839

: -10

: 0412628855 EP type number

Governor

Governer design. : RQ300/1050PA993-10

Governer no. : 0421801760

Cust. part No. : 0250749502

Customer-spec. information : MB-NFZ Customer : 0M442 LA Motor Power KW : 370.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C 40 Tolerance °C 2.0

Overflow valve : 1417413047

Inlet press. bar : Tolerance bar 0.1

Tolerance l/h: + 10.0

Test nozzle holde

assembly : 1688901105

Opening pressure

208.5 bar Tolerance bar : +- 1.5

: 1409918004 Lube oil

Test Lines : 1680750075

Outside diameter : 8.0

x inside diameter: 3.0

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm 5.05 : +- 0.05 Tolerance mm

test only : + 0.10

Rack travel in mm: 14.50 : +- 0.50 Tolerance mm

: 8-7-2-6-3 Firing order

: - 5- 4- 1

Phasing : 0-45-90-135-180

: -225-270-315 Tolerance : + 0.30

Check

tolerance "NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 8

BASIC SETTING

Rated speed rpm 550

Rack travel in mm: 15.20

Tolerance mm : + 0.05 +	
Dal months	Rated speed rpm : 510
Del. quantity + cm3/1000 strokes : 289.0 +	guide sleeve travel mm : 6.00
CIRD 1000 3C1 0KC3 . 207.0	Tolerance mm : + 0.10
Tolerance	
cm3/1000 strokes : +- 1.0	Rated speed rpm : 1280
Check tolerance	guide sleeve travel mm : 11.50
cm3/1000s. : +- 4.0	Tolerance mm : + 0.50
Spreed	GUIDE SLEEVE POSITION
cm3/1000 strokes : 6.0	GOIDE STEENE LOSTLION
	Rated speed rpm : 600
Check tolerance	
cm3/1000s. : 9.0	Rack travel in mm : 20.00 Tolerance mm : +- 0.80
2nd speed rpm : 300	roterance min : +- 0.00
+	
Rack travel in mm: 5.20 + Tolerance mm: + 0.30 +	FULL LOAD DELIVERY AT FULL LOAD STOP
Del. quantity	Rated speed rpm : 550
cm3/1000 strokes : 19.0 +	Aneroid pressure
Tolerance +	hPa : 1200
cm3/1000 strokes : + 3.0 + Check tolerance	Del. quantity cm3/1000 strokes : ^9.0
cm3/1000s. : +- 6.0	Tolerance
Spreed	cm3/1000 strokes : + 1.0
Tolerance	Check tolerance
cm3/1000 strokes : 6.0 + Check tolerance	cm3/1000s. : +- 4.0 Spreed
cm3/1000s. : 10.0	Tolerance
+	cm3/1000 strokes : 6.0
(D) SETTING OF THE SECTION DING	Check tolerance
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	cm3/1000s. : 9.0
42111 0012111011	
	RATED SPEED
GUIDE SLEEVE TRAVEL	
Rated speed rpm : 300	control lever
guide sleeve	position degree : 98.0
travel mm : 1.85	tolerance degree : +- 4.0
Tolerance mm : + 0.10	rack travel mm : 14.20
Rated speed rpm : 1104	Rated speed rpm : 1098
guide sleeve	Tolerance 1/min : +- 5
travel mm : 6.34 + O.10	rack travel mm : 4.00
roterance man : +- 0.10	Rated speed rpm : 1195
Rated speed rpm : 1050	Tolerance 1/min : + 15
guide sleeve	0.75
travel mm : 6.00 + O.10	rack travel mm : 0.75 Tolerance mm : + 0.75
T T	Rated speed rpm : 1350
Rated speed rpm : 271	,
guide steeve	LOU TOLE
travel mm : 1.33 + Tolerance mm : + 0.10 +	LOW IDLE

control lever position degree tolerance degree	: 69.0 : +- 4.0	‡ ‡	rack travel mm Tolerance mm	: 11.65 : + 0.20
Testing:		1	START CUT-OUT	
Rated speed rpm	• 300	1	Rated speed rpm Check	: > 100
rack travel mm	• 3.50	I	speed 1/min	: > 80
rack travel mm Tolerance mm	: +- 0.10	1	Rated speed rpm	: < 220
, 4 (4) 4, (4)		1	Check	. \ 220
rack travel mm	: 2.00	1	speed 1/min	: < 240
Rated speed rpm	: 350	1	,	
Rated speed rpm Tolerance 1/min	: +- 20	+		
		+	FUEL DELIVERY CHA	ARACTERISTICS
Rated speed rpm	: 200	+		
		†	Aneroid pressure	
CRT mm min.	: > 5.50	+	hPa	: 500
		+	Rated speed rpm	: 400
TODOLE CONTROL			Del. quantity	104.0
TORQUE CONTROL		†	cm3/1000 strokes	: 196.0
Datoid aroad arm	. 550	†	Tolerance	4 5
Rated speed rpm	: 330 • 45.30	Ť	cm3/1000 strokes Check tolerance	: t- 1.5
rack travel mm Tolerance mm	• +- 0.05	I	cm3/1000s.	: +- 4.5
TO CET WILL IN III	. += 0.05	I	CIID7 (0005.	: +- 4.5
Rated speed rom	· 750	I	Aneroid pressure	
Rated speed rpm rack travel mm	15.20	1	hPa	: 1200
rack travel mm Tolerance mm	: + 0.10	1	Rated speed rpm	: 750
1000101100 10411		+	Del. quantity	. 130
Rated speed rpm	: 1050	1	cm3/1000 strokes	: 274.5
rack travel mm	: 15.20	1	Tolerance	
rack travel mm Tolerance mm	: + 0.10	+	cm3/1000 strokes	: +- 3.0
		+	Check tolerance	
		+	cm3/1000s.	: ← 6.0
ANEROID/ALTITUDE		+		
COMPENSATOR TEST		+	Aneroid pressure	
		+	hPa	: 1200
		†	Rated speed rpm	
SETTING		Ť	Del. quantity	2/0.0
Datasi superi sus	. /.00	†	cm3/1000 strokes	: 269.0
Rated speed rpm		T	Tolerance cm3/1000 strokes	70
Pressure hPa rack travel mm		I	Check tolerance	
Tolerance mm	: + 0.05	I	cm3/1000s.	
TOCOT GITTOC TIMIT		1	01107 (0000.	0.0
MEASUREMENT		1	Aneroid pressure	
		1	hPa	: -
Pressure hPa	: -	+	Rated speed rpm	: 500
Rated speed rpm	400	+	Del. quantity	
rack travel mm	: 8.25	+	cm3/1000 strokes	: 136.0
Tolerance mm	: +- 0.15	+	Tolerance	
		+	cm3/1000 strokes	
Rated speed rpm	: 400	+	Check tolerance	
D	. 700	†	cm3/1000s.	: + 4.0
Pressure hPa		†	Spreed	
rack travel mm	: 9.95	†	Tolerance	
Tolerance mm	: ← 0.20	Ţ	cm3/1000 strokes Check tolerance	. 0.0
Pressure hPa	: 500	I	cm3/1000s.	: 12.0
i i essui e lifa	. 200	T	JIID/ 10000.	. 16.0

BREAKAWAY

Rack travel in mm: 14.20 Rated speed rpm: 1098 Tolerance 1/min: +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 255.0

Tolerance cm3/1000 strokes : +- 20.0

Check tolerance

Check tolerance cm3/1000s.

cm3/1000s. : +- 24.0

LOW IDLE

300 Rated speed rpm rack travel mm 5.20 Tolerance mm 0.30 Del. quantity cm3/1000 strokes : 19.0 Tolerance cm3/1000 strokes 3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes : 6.0

10.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 17.03.95 Test oil : ISO 4113

Combination No. : 0402648987

Injection pump

Pump designation : PE8P120A320LS7838

: -10

EP type number : 0412628854

Governor

Governer design. : RQV300...950PA1199

Cust. part No. : 0250746202

Customer-spec. information : MB-NFZ Customer Motor : 0M442 LA Power KW : 320.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 1417413047

Inlet press. bar : 1.5 Tolerance bar 0.1

Tolerance l/h : **←** 10.0

Test nozzle holde

: 1688901105 assembly

Opening pressure

208.5 bar Tolerance bar 1.5

Lube oil : 1409918004

: -2 : 0421814144 Governer no.

Test lines : 1680750075

Outside diameter : 8.0

x inside diameter: x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : + 1.0

Prestroke mm 5.25 : + 0.05Tolerance mm

test only : + 0.10

Rack travel in mm: 20.50 Tolerance mm : + 0.50

: 8-7-2-6-3 Firing order

: - 5- 4- 1

: 0-45-90-135-180 Phasing : -225-270-315

: + - 0.30Tolerance

Check

tolerance °NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 8

BASIC SETTING

Rated speed rpm : 550

	+	guide sleeve
Rack travel in mm :	: 15.00 	travel mm : 5.23
Tolerance mm	: +- 0.05 +	Tolerance mm : +- 0.25
	}	
Del. quantity		Rated speed rpm : 780
cm3/1000 strokes	• 254.0	guide sleeve
CIRCLE TOOC SELECTES	1	travel mm : 6.31
Tolerance		Tolerance mm : + 0.25
		roterance num : 7 0.25
cm3/1000 strokes	: + 1.0 +	
		Rated speed rpm : 1092
Check tolerance	+	guide sleeve
cm3/1000s.	: 	travel mm : 10.00
	+	Tolerance mm : + 0.25
Spreed	+	
Tolerance	1	Rated speed rpm : 1190
cm3/1000 strokes	: 6.0	guide sleeve
	. 9.9	travel mm : 11.50
Charle talanana		
Check tolerance	<u> </u>	Tolerance mm : + 0.50
cm3/1000s.	: 9.0 +	
	+	
2nd speed rpm :	: 300 +	GUIDE SLEEVE POSITION
	+	
Rack travel in mm:	: 6.10 	
·	: ← 0.30 →	control lever
Del. quantity	1	position degree : - 1
cm3/1000 strokes :	: 19.0	Rated speed rpm : 1045
	7	Rated speed rpm : 1045
Tolerance	†	
cm3/1000 strokes :	: + 3.0 	Rack travel in mm : 14.00
Check tolerance	+	Tolerance mm : + 1.30
cm3/1000s. :	+ 6.0 +	
Spreed	1	
Tolerance	1	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes :	6.0	TOLE COND DECEMENT AT TOLE CON. OTO
Check tolerance	7	Rated speed rpm : 550
	T T	
cm3/1000s. :	10.0	Aneroid pressure
	†	hPa : 1000
	+	Del. quantity
(B) SETTING OF INJE	ECTION PUMP +	cm3/1000 strokes : 254.0
WITH GOVERNOR	4	Tolerance
	1	cm3/1000 strokes : + 1.0
		Check tolerance
GUIDE SLEEVE TRAVEL	1	cm3/1000s. : +- 4.0
COINE OFFERE LUMNER	·	
Data dans da	700	Spreed
Rated speed rpm :	300 +	Tolerance
guide sleeve	+	cm3/1000 strokes : 6.0
travel mm :	1.29	Check tolerance
Tolerance mm :	+ 0.20 +	cm3/1000s. : 9.0
	+	
Rated speed rpm :	1012	
guide sleeve	1	RATED SPEED
travel mm :	8.60	
	+ 0.15	
ioterance into	7	control lever
Datal annual man	F/7	
Rated speed rpm :	567	position degree : 122.0
guide sleeve	†	tolerance degree : +- 4.0
travel mm :	4.66 	
Tolerance mm :	← 0.25 +	rack travel mm : 14.00
	1	Rated speed rpm : 995
Pated speed nom .		
KAIPO SCHEPO TIMO	617	Tolerance 1/min : +- 5
Rated speed rpm :	617	Tolerance 1/min : +- 5
Rated Speed Phil :	617	Tolerance 1/min : +- 5

rack travel mm : 4.00 Rated speed rpm : 1105 Tolerance 1/min : + 15 rack travel mm : 0.75 Tolerance mm : + 0.75 Rated speed rpm : 1200 LOW IDLE	Rated speed rpm : 400 Pressure hPa : 250 rack travel mm : 10.95 Tolerance mm : + 0.15 Pressure hPa : 550 rack travel mm : 13.85 Tolerance mm : + 0.15
control lever position degree : 82.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 4.50 Tolerance mm : + 0.10	START CUT-OUT Rated speed rpm : > 190 Check speed 1/min : > 170 Rated speed rpm : < 220 Check speed 1/min : < 240
Rated speed rpm : 200 + CRT mm min. :> 7.00 +	FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : 550
CONTINUOUS-ACTION CONTROL	Rated speed rpm : 79 Del. quantity
Rated speed rpm : 325	cm3/1000 strokes : 209.0 Tolerance cm3/1000 strokes : + 1.5
TORQUE CONTROL	Check tolerance cm3/1000s. : +- 4.5
TORQUE CONTROL Rated speed rpm : 550 rack travel mm : 15.00 Tolerance mm : +- 0.05 Rated speed rpm : 950 rack travel mm : 15.00 Tolerance mm : 15.00 Tolerance mm : +- 0.10	Aneroid pressure hPa : 1000 Rated speed rpm : 950 Del. quantity cm3/1000 strokes : 242.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance
ANEROID/ALTITUDE COMPENSATOR TEST	cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance
SETTING	cm3/1000s. : 12.0
Rated speed rpm : 400 Pressure hPa : 1000 rack travel mm : 15.00 Tolerance mm : + 0.05 MEASUREMENT	Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 135.0 Tolerance cm3/1000 strokes : + 1.0
Pressure hPa : - Rated speed rpm : 400 rack travel mm : 9.10 Tolerance mm : + 0.15	Check tolerance cm3/1000s. : +- 4.0 Spreed

Tolerance

cm3/1000 strokes :

Check tolerance

cm3/1000s. : 12.0

8.0

BREAKAWAY

Rack travel in mm: 14.00 Rated speed rpm: 995

Tolerance 1/min : + 5

STARTING FUEL DELIVERY

Rated speed rpm : 100

Del. quantity

cm3/1000 strokes : 235.0

Tolerance

cm3/1000 strokes : + 20.0

Check tolerance

cm3/1000s. : + 24.0

LOW IDLE

Rated speed rpm : 300

rack travel mm : 6.10 Tolerance mm : + 0.30

Del. quantity

cm3/1000 strokes : 19.0

Tolerance

cm3/1000 strokes : +- 3.0

Check tolerance

cm3/1000s. : +- 6.0

Spreed

Tolerance cm3/1000 strokes : 6.0

Check tolerance

cm3/1000s. : 10.0

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 17.03.95 Test oil : ISO 4113

Combination No. : 0402648992

Injection pump

Pump designation : PE8P12OA32OLS7847-2

EP type number : 0412628885

Governor

Governer design. : RQV300...1050PA1033

: -21

Governer no. : 0421814145

Cust. part No. : 0250747502

Customer—spec. information
Customer : MB-NFZ
Motor : OM442 LA
Power KW : 280.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1417413047

Inlet press. bar : 1.5
Tolerance bar : +- 0.1

Overflow quantity

min. l/h : 170 Tolerance l/h : + 10.0

Test nozzle holde

assembly : 1688901105

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5 Lube oil : 1409918004

Test lines : 1680750075

Outside diameter : 8.0

x inside diameter : 3.0
x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 5.55 Tolerance mm : + 0.05

test only : + 0.10

Rack travel in mm : 20.50
Tolerance mm : +- 0.50

Firing order : 8-7-2-6-3

: - 5- 4- 1

Phasing : 0-45-90-135-180

: -225-270-315

Tolerance : \leftarrow 0.30

Check

tolerance "NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 8

BASIC SETTING

Rated speed rpm : 550

	•	
5) ()	t 22	- guide sleeve
Rack travel in m		travel mm : 5.03
Tolerance mm	: +- 0.05	Tolerance mm : +- 0.25
Del. quantity		- - Rated speed rpm : 820
cm3/1000 strokes	: 239.0	- Mateu speed rpm : 020 - guide sleeve
CIID/ 1000 STIOKES	· 239.0	travel mm : 6.13
Tolerance	 I	Tolerance mm : + 0.25
cm3/1000 strokes	: +- 1.0 I	Total alice mili . + 0.25
CIDY TODO SCIORES	· · · · · · · I	Rated speed rpm : 1183
Check tolerance	1	guide steeve
cm3/1000s.	: + 4.0	travel mm : 10.00
	1	Tolerance mm : + 0.25
Spreed	***************************************	
Tolerance	1	Rated speed rpm : 1280
cm3/1000 strokes	: 6.0	guide sleeve
	1	travel mm : 11.50
Check tolerance		Tolerance mm : +- 0.50
cm3/1000s.	: 9.0	
	1	
2nd speed rpm	: 300	GUIDE SLEEVE POSITION
•	<u> </u>	
Rack travel in mo	n: 5.70 🗼	
Tolerance mm	: ← 0.30 +	control lever
Del. quantity	+	position degree : - 1
cm3/1000 strokes	: 13.0 +	Rated speed rpm : 1140
Tolerance	+	
cm3/1000 strokes	: ← 3.0 +	Rack travel in mm : 13.30
Check tolerance	+	Tolerance mm : +- 1.30
cm3/1000s.	: ← 6.0 +	
Spreed	+	
Tolerance	+	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes	: 8.0 +	
Check tolerance	+	Rated speed rpm : 550
cm3/1000s.	: 10.0 +	Aneroid pressure
	+	hPa : 1200
	<u> </u>	Del. quantity
(B) SETTING OF IN	JECTION PUMP +	cm3/1000 strokes : 239.0
WITH GOVERNOR	1	Tolerance
	§	
	1	cm3/1000 strokes : +- 1.0
		cm3/1000 strokes : +- 1.0 Check tolerance
GUIDE SLEEVE TRAV	EL	cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0
	+	cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed
Rated speed rpm	; 300	cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000S. : +- 4.0 Spreed Tolerance
Rated speed rpm guide sleeve	: 300	<pre>cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0</pre>
Rated speed rpm guide sleeve travel mm	: 300 : 1.29	<pre>cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance</pre>
Rated speed rpm guide sleeve	: 300	<pre>cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0</pre>
Rated speed rpm guide sleeve travel mm Tolerance mm	: 300 : 1.29 : + 0.20	<pre>cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance</pre>
Rated speed rpm guide sleeve travel mm Tolerance mm	: 300 : 1.29	cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 9.0
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	: 300 : 1.29 : + 0.20 : 1110	<pre>cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance</pre>
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm	: 300 : 1.29 : + 0.20 : 1110 : 8.58	cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 9.0
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	: 300 : 1.29 : + 0.20 : 1110	cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 300 : 1.29 : + 0.20 : 1110 : 8.58 : + 0.15	cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 300 : 1.29 : + 0.20 : 1110 : 8.58	cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever position degree : 121.0
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	: 300 : 1.29 : + 0.20 : 1110 : 8.58 : + 0.15 : 558	cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm	: 300 : 1.29 : ← 0.20 : 1110 : 8.58 : ← 0.15 : 558 : 4.53	cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever position degree : 121.0 tolerance degree : + 4.0
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	: 300 : 1.29 : + 0.20 : 1110 : 8.58 : + 0.15 : 558	cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever position degree : 121.0 tolerance degree : + 4.0 rack travel mm : 13.30
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Tolerance mm	: 300 : 1.29 : + 0.20 : 1110 : 8.58 : + 0.15 : 558 : 4.53 : + 0.25	cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever position degree : 121.0 tolerance degree : + 4.0 rack travel mm : 13.30 Rated speed rpm : 1095
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm	: 300 : 1.29 : ← 0.20 : 1110 : 8.58 : ← 0.15 : 558 : 4.53	cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever position degree : 121.0 tolerance degree : + 4.0 rack travel mm : 13.30

rack travel mm : 4.00 Rated speed rpm : 1185 Tolerance 1/min : + 15 rack travel mm : 0.75 Tolerance mm : + 0.75 Rated speed rpm : 1350 LOW IDLE control lever position degree : 66.0 tolerance degree : + 4.0	Pressure hPa : - Rated speed rpm : 400 rack travel mm : 11.35 Tolerance mm : + 0.20 Rated speed rpm : 400 Pressure hPa : 300 rack travel mm : 12.55 Tolerance mm : + 0.20 Pressure hPa : 450 rack travel mm : 13.85 Tolerance mm : + 0.20
Testing:	START CUT-OUT
Rated speed rpm : 300 rack travel mm : 5.50 Tolerance mm : + 0.10 Rated speed rpm : 200 CRT mm min. : > 7.30	Rated speed rpm : > 100 Check speed 1/min : > 80 Rated speed rpm : < 220 Check speed 1/min : < 240
CONTINUOUS-ACTION CONTROL	FUEL DELIVERY CHARACTER TICS
Rated speed rpm : 375	Aneroid pressure hPa : 450 Rated speed rpm : 400
TORQUE CONTROL	+ Del. quantity + cm3/1000 strokes : 198.0
Rated speed rpm : 550 rack travel mm : 14.80 Tolerance mm : + 0.05	Tolerance - cm3/1000 strokes : + 1.5 - Check tolerance - cm3/1000s. : + 4.5
Rated speed rpm : 1050 rack travel mm : 14.30 Tolerance mm : +- 0.10 Rated speed rpm : 850	Aneroid pressure + hPa : 1200 + Rated speed rpm : 1050 - Del. quantity + cm3/1000 strokes : 217.0
Rated speed rpm : 850 rack travel mm : 14.50 Tolerance mm : + 0.10	Tolerance cm3/1000 strokes : + 2.0 Check tolerance
ANEROID/ALTITUDE COMPENSATOR TEST	- cm3/1000s. : + 5.0 - Spreed - Tolerance - cm3/1000 strokes : 8.0
SETTING	Check tolerance cm3/1000s. : 12.0
Rated speed rpm : 400 Pressure hPa : 1200 rack travel mm : 14.80 Tolerance mm : + 0.05 MEASUREMENT	Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 144.0 Tolerance cm3/1000 strokes : + 1.0

Check tolerance cm3/1000s.4.0 : +-Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. 12.0 BREAKAWAY Rack travel in mm: 13.30 Rated speed rpm Tolerance 1/min STARTING FUEL DELIVERY 100 Rated speed rpm : Del. quantity cm3/1000 strokes : 210.0 Tolerance cm3/1000 strokes : + 20.0 Check tolerance cm3/1000s.: + 24.0LOW IDLE Rated speed rpm 300 rack travel mm 5.70 Tolerance mm : + - 0.30Del. quantity 13.0 cm3/1000 strokes : Tolerance cm3/1000 strokes : +-3.0 Check tolerance

cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. 10.0

Note remarks -

Refer to Service Info for test and adjustment instructions.

See microcard(s) W400/...

Edition : 17.03.95 Test oil : ISO 4113

Combination No. : 0402648993

Injection pump

Pump designation : PE8P120A320LS7838

: -10

EP type number : 0412628854

Governor

Governer design. : RQ300/950PA971-11

Governer no. : 0421801764

Cust. part No. : 0260740202

Customer-spec. information

Customer : MB-NFZ Motor : 0M442 LA

Power KW : 320.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. *C Tolerance °C 2.0

: 1417413047 Overflow valve

Inlet press. bar : 1.5 Tolerance bar : **←** 0.1

: +- 10.0 Tolerance l/h

Test nozzle holde

: 1688901105 assembly

Opening pressure

: 208.5 bar Tolerance bar : + 1.5

Lube oil : 1409918004

Test Lines : 1680750075

Outside diameter : 8.0

x inside diameter: 3.0

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 26.0 Tolerance bar : + 1.0

Prestroke mm : 5.25
Tolerance mm : + 0.05

test only : +- 0.10

Rack travel in mm : 20.50 Tolerance mm : + 0.50

Firing order : 8-7-2-6-3

: - 5- 4- 1

Phasing : 0-45-90-135-180

: -225-270-315

Tolerance : + 0.30

Check

tolerance °NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. :

BASIC SETTING

Rated speed rpm : 550

	t	guide sleeve	
Rack travel in mm :		travel mm	: 4.76
Tolerance mm :	+ 0.05	Tolerance mm	: +- 0.10
.	 †		
Del. quantity	†	Rated speed rpm	: 580
cm3/1000 strokes :	254.0	guide sleeve	
		travel mm	: 6.00
Tolerance	†	Tolerance mm	: +- 0.10
cm3/1000 strokes :	+ 1.0 +		
		Rated speed rpm	: 1190
Check tolerance	+	guide sleeve	
cm3/1000s. :	+ 4.0 +	travel mm	: 11.50
_	+	Tolerance mm	: +- 0.50
Spreed	+		
Tolerance	†		
cm3/1000 strokes :	6.0	GUIDE SLEEVE POSIT	ION
	 †		488
Check tolerance	†	Rated speed rpm	: 600
cm3/1000s. :	9.0	~ 4	
•	 †	Rack travel in mm	
2nd speed rpm :	300 +	Tolerance mm	: 0.80
0-1	†		
Rack travel in mm :	6.10		
Tolerance mm :	+ 0.30 +	FULL LOAD DELIVERY	AT FULL LOAD STOP
Del. quantity	10.0		550
cm3/1000 strokes :	19.0	•	: 550
Tolerance		Aneroid pressure	44.00
	+ 3.0 +		: 1000
Check tolerance		Del. quantity	05/ 5
	+ 6.0 +	cm3/1000 strokes	: 254.0
Spreed	†	Tolerance	. 4.0
Tolerance	t t		: +- 1.0
cm3/1000 strokes :	6.0	Check tolerance	
Check tolerance	10.0		: ← 4.0
cm3/1000s. :	10.0	Spreed	
	†	Tolerance	
(D) SETTING OF THIS	TTON 01110		: 6.0
(B) SETTING OF INJECT	ITON POMP	Check tolerance	. 0.0
WITH GOVERNOR	Ť	cm3/1000s.	: 9.0
	†		
CHINE OF FEVE TRAVEL		DATEN COFEN	
GUIDE SLEEVE TRAVEL	Ť	RATED SPEED	
Pated speed nam .	300		
Rated speed rpm : guide sleeve	300	control lever	
travel mm :	1.72	position degree	: 98.0
Tolerance mm :	+ 0.10 I	tolerance degree	
Toterance min :	T	toterance degree	4.0
Rated speed rpm :	1005 [‡]	rack travel mm	: 14.00
guide sleeve	1003	Rated speed rpm	998
travel mm :	6.34	Tolerance 1/min	· +- 8
	- 0.10 I	Totalice Trimiti	. 4- 0
Oterance man	I	rack travel mm	4.00
Rated speed rpm :	950	Rated speed rpm	: 1100
guide sleeve	<u> </u>	Tolerance 1/min	: +- 15
travel mm :	6.00	TOTEL ALICE TAILER	
Tolerance mm : 4	⊢ 0.10 I	rack travel mm :	. 0.75
TOTEL OF THE STATE	<u> </u>	Tolerance mm	+- 0.75
Rated speed rpm :	451 I		1200
nated speed (pill)	T I	waten sheen thin	
	т		

LOW IDLE	
control lever position degree tolerance degree	: 74.0 : + 4.0
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 300 : 6.10 : + 0.10
rack travel mm Rated speed rpm Tolerance 1/min	: 2.00 : 430 : + 30
Rated speed rpm	: 200
CRT mm min.	: > 9.00
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	: 550 : 15.00 : ← 0.05
Rated speed rpm rack travel mm Tolerance mm	: 950 : 15.00 : + 0.05
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 400 : 1000 : 15.00 : + 0.05
MEASUREMENT	
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 400 : 9.10 : + 0.15
Rated speed rpm	: 400
Pressure hPa rack travel mm Tolerance mm	: 250 : 10.95 : + 0.15
Pressure hPa	: 550

rack travel mm Tolerance mm	: 13.85 : + 0.15	
START CUT-OUT		
Rated speed rpm Check	: > 190	
speed 1/min Rated speed rpm	: > 170 : > 220	
Check speed 1/min	: > 240	
FUEL DELIVERY CHARACTERISTICS		
Aneroid pressure	 _	
hPa Rated speed rpm Del. quantity	: 550 : 400	
cm3/1000 strokes	: 209.0	
Tolerance cm3/1000 strokes	: +- 1.5	
Check tolerance cm3/1000s.	: ← 4.5	
Aneroid pressure nPa Rated speed rpm	: 1000 : 950	
Del. quantity cm3/1000 strokes	: 242.0	
Tolerance cm3/1000 strokes	: +- 3.0	
Check tolerance cm3/1000S. Spreed	: +- 6.0	
Tolerance cm3/1000 strokes	: 8.0	
Check tolerance cm3/1000S.	: 12.0	
Aneroid pressure		
Rated speed rpm	500	
Del. quantity cm3/1000 strokes	: 135.0	
Tolerance cm3/1000 strokes	: + 1.0	
Check tolerance cm3/1000S. Spreed	: +- 4.0	
Tolerance cm3/1000 strokes	: 8.0	
Check tolerance cm3/1000s.	: 12.0	
BREAKAWAY		

Rack travel in mm: 14.00 Rated speed rpm : Tolerance 1/min : +-

STARTING FUEL DELIVERY

Rated speed rpm 100

Del. quantity cm3/1000 strokes : 235.0

Tolerance

cm3/1000 strokes : + 20.0

Check tolerance

cm3/1000s. : **←** 24.0

LOW IDLE

Rated speed rpm 300 6.10 rack travel mm Tolerance mm : +- 0.30 Del. quantity cm3/1000 strokes : 19.0

Tolerance

cm3/1000 strokes : +-3.0

Check tolerance

cm3/1000s. 6.0

Spreed

Tolerance

cm3/1000 strokes : 6.0

Check tolerance

cm3/1000s. 10.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 17.03.95 Edition Test oil : ISO 4113

Combination No. : 0402648994

Injection pump

Pump designation : PE8P120A320LS7838

: -10

: 0412628854 EP type number

Governor

: RQV300...950PA797 Governer design.

: -41

Governer no. : 0421814126

: 0260740302 Cust. part No.

Customer-spec. information : MB-NFZ Customer Motor : 0M442 LA Power KW : 320.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 1417413047

Inlet press. bar : 1.5 Tolerance bar 0.1

Tolerance L/h : **←** 10.0

Test nozzle holde

: 1688901105 assembly

Opening pressure

208.5 Tolerance bar : +- 1.5

: 1409918004 Lube oil

Test lines : 1680750075

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : + 1.0

Prestroke mm : +- 0.05 Tolerance mm

test only : ← 0.10

Rack travel in mm: 20.50 : +- 0.50 Tolerance mm

: 8-7-2-6-3 Firing order

: - 5- 4- 1

Phasing : 0-45-90-135-180 : -225-270-315

Tolerance : + 0.30

Check

tolerance "NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 8

BASIC SETTING

550 Rated speed rpm

Rack travel in mm: 15.00 Tolerance mm: +- 0.05	<pre># guide sleeve # travel mm : 5.23 # Tolerance mm : + 0.25</pre>
Del. quantity cm3/1000 strokes : 254.0	Rated speed rpm : 780 guide sleeve
Tolerance cm3/1000 strokes : + 1.0	travel mm : 6.31 Tolerance mm : + 0.25
Check tolerance cm3/1000s. : + 4.0	Rated speed rpm : 1092 guide sleeve travel mm : 10.00
Spreed Tolerance	Tolerance mm : + 0.25 Rated speed rpm : 1190
cm3/1000 strokes : 6.0 Check tolerance	guide sleeve travel mm : 11.50 Tolerance mm : + 0.50
cm3/1000s. : 9.0	İ
2nd speed rpm : 300	GUIDE SLEEVE POSITION
Rack travel in mm: 6.10	+
Tolerance mm : + 0.30	+ control lever
Del. quantity	+ position degree : -1
cm3/1000 strokes : 19.0 Tolerance	+ Rated speed rpm : 1035
cm3/1000 strokes : +- 3.0	+ Rack travel in mm: 14.00
Check tolerance	Tolerance mm : + 1.30
cm3/1000s. : + 6.0	Ť
Spreed Tolerance	FULL LOAD DELTHERY AT SHILL LOAD STOP
cm3/1000 strokes : 6.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance	Rated speed rpm : 550
cm3/1000s. : 10.0	+ Aneroid pressure
110.7.1000	+ hPa : 1000
	Del. quantity
(B) SETTING OF INJECTION PUMP	+ cm3/1000 strokes : 254.0
WITH GOVERNOR	+ Tolerance
	+ cm3/1000 strokes : + 1.0
	- Check tolerance
GUIDE SLEEVE TRAVEL	+ cm3/1000s. : + 4.0
Batad aread mm . 200	+ Spreed
Rated speed rpm : 300	+ Tolerance + cm3/1000 strokes : 6.0
guide sleeve travel mm : 1.29	+ cm3/1000 strokes : 6.0 + Check tolerance
Tolerance mm : + 0.20	+ cm3/1000s. : 9.0
Total alive min	- 10003 9.0
Rated speed rpm : 1012	
guide sleeve	DATED COFFE
	RATED SPEED
travel mm : 8.60	RATED SPEED
Tolerance mm : +- 0.15	+
Tolerance mm : +- 0.15	control lever
Tolerance mm : +- 0.15 Rated speed rpm : 567	control lever position degree : 123.0
Tolerance mm : +- 0.15	control lever position degree : 123.0
Tolerance mm : +- 0.15 Rated speed rpm : 567 guide sleeve	control lever position degree : 123.0
Tolerance mm : +- 0.15 Rated speed rpm : 567 guide sleeve travel mm : 4.66	control lever position degree : 123.0 tolerance degree : +- 4.0

rack travel mm : 4.00 Rated speed rpm : 1100 Tolerance 1/min : + 15 rack travel mm : 0.75 Tolerance mm : + 0.75 Rated speed rpm : 1200 LOW IDLE	Rated speed rpm : 400 Pressure hPa : 250 rack travel mm : 10.95 Tolerance mm : + 0.15 Pressure hPa : 550 rack travel mm : 13.85 Tolerance mm : + 0.15
control lever position degree : 84.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 6.10 Tolerance mm : + 0.10	START CUT-OUT Rated speed rpm : > 190 Check speed 1/min : > 170 Rated speed rpm : < 220 Check speed 1/min : < 240
Rated speed rpm : 200 CRT mm min. :> 8.90	FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : 550 Rated speed rpm : 70
CONTINUOUS-ACTION CONTROL Rated speed rpm : 350 TORQUE CONTROL	Del. quantity cm3/1000 strokes : 209.0 Tolerance cm3/1000 strokes : + 1.5 Check tolerance cm3/1000S. : + 4.5
Rated speed rpm : 550 rack travel mm : 15.00 Tolerance mm : + 0.05 Rated speed rpm : 950 rack travel mm : 15.00 Tolerance mm : + 0.05	Aneroid pressure hPa : 1000 Rated speed rpm : 950 Del. quantity cm3/1000 strokes : 242.0 Tolerance cm3/1000 strokes : + 3.0
ANEROID/ALTITUDE COMPENSATOR TEST SETTING	Check tolerance cm3/1000S. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000S. : 12.0
Rated speed rpm : 400 Pressure hPa : 1000 rack travel mm : 15.00 Tolerance mm : + 0.05 MEASUREMENT	Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 135.0 Tolerance cm3/1000 strokes : + 1.0
Pressure hPa :	Check tolerance cm3/1000s. : +- 4.0 Spreed

Tolerance cm3/1000 strokes : 8.0 Check tolerance 12.0 cm3/1000s. **BREAKAWAY** Rack travel in mm : 14.00 Rated speed rpm 5 Tolerance 1/min STARTING FUEL DELIVERY 100 Rated speed rpm Del. quantity cm3/1000 strokes : 235.0 Tolerance cm3/1000 strokes : \leftarrow 20.0 Check tolerance cm3/1000s. : +- 24.0 LOW IDLE Rated speed rpm 300 6.10 rack travel mm : + 0.30 Tolerance mm Del. quantity cm3/1000 strokes : 19.0 Tolerance cm3/1000 strokes 3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. 10.0 :

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 16.03.95 Test oil : ISO 4113

Combination No. : 0402648995

Injection pump

Pump designation : PE8P12OA32OLS7847-2

EP type number : 0412628885

Governor

Governer design. : RQV300...950PA1168

: -4

Governer no. : 0421814130

Cust. part No. : 0250749602

Customer-spec. information
Customer : MB-NFZ
Motor : 0M402 LA
Power KW : 280.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40Tolerance °C : \leftarrow 2.0

Overflow valve : 1417413025

Inlet press. bar : 1.5
Tolerance bar : + 0.1

Test nozzle holde

assembly : 1688901105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Lube oil : 1409918004

Test Lines : 1680750075

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 5.55
Tolerance mm : + 0.05

test only : + 0.10

Rack travel in mm : 20.50Tolerance mm : + 0.50

Firing order : 8-7-2-6-3

: - 5- 4- 1

Phasing : 0-45-90-135-180

: -225-270-315Tolerance : + 0.30

Check

tolerance °NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 8

BASIC SETTING

Rated speed rpm : 550

Rack travel in mm : 14.80

Tolerance mm : ← 0.05	.
	Rated speed rpm : 790
Del. quantity cm3/1000 strokes : 239.0	+ guide sleeve + travel mm : 6.48
	Tolerance mm : +- 0.25
Tolerance - cm3/1000 strokes : +- 1.0 -	Rated speed rpm : 1100
	guide sleeve
Check tolerance	travel mm : 10.00
cm3/1000s. : +- 4.0	Tolerance mm : +- 0.25
Spreed -	Rated speed rpm : 1210
Tolerance - cm3/1000 strokes : 6.0 -	+ guide sleeve + travel mm : 11.50
	Tolerance mm : +- 0.50
Check tolerance - cm3/1000s. : 9.0 -	
•	GUIDE SLEEVE POSITION
2nd speed rpm : 300 -	†
Rack travel in mm: 5.70	control lever
Tolerance mm : + 0.30 -	position degree : - 1
Del. quantity - cm3/1000 strokes : 13.0 -	Rated speed rpm : 1035
Tolerance	Rack travel in mm : 13.00
cm3/1000 strokes : +- 3.0 Check tolerance	Tolerance mm : + 1.30
cm3/1000s. : +- 6.0	
Spreed - Tolerance -	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes : 8.0	Rated speed rpm : 550
Check tolerance - cm3/1000s. : 10.0 -	Aneroid pressure hPa : 1200
cm3/1000s. : 10.0 -	hPa : 1200 Del. quantity
(D) OFTENO OF THE TON DIME	cm3/1000 strokes : 239.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	- Tolerance - cm3/1000 strokes : ← 1.0
	- Check tolerance
GUIDE SLEEVE TRAVEL	- cm3/1000S. : +- 4.0 - Spreed
	Tolerance
Rated speed rpm : 300 - guide sleeve	- cm3/1000 strokes : 6.0 - Check tolerance
travel mm : 1.49	- cm3/1000s. \ : 9.0
Tolerance mm : + 0.25	
Rated speed rpm : 1012	- RATED SPEED
guide sleeve	
travel mm : 8.56 Tolerance mm : + 0.25	control lever
+	position degree : 123.0
Rated speed rpm : 589 guide sleeve	- tolerance degree : +- 4.0
travel mm : 4.97	- rack travel mm : 13.00
Tolerance mm : + 0.25	- Rated speed rpm : 998 - Tolerance 1/min : +- 8
Rated speed rpm : 639	- Tolerance 1/min : +- 8 -
guide sleeve	- rack travel mm : 4.00
travel mm : 5.51 + Tolerance mm : + 0.25	- Rated speed rpm : 1090 - Tolerance 1/min : +- 15
T	

rack travel mm Tolerance mm Rated speed rpm	: ← 0.75	Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: 10.60
LOW IDLE		Rated speed rpm	: 400
control lever position degree tolerance degree Testing:	: 64.0 : ← 4.0	Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm	: 12.90 : + 0.10 : 300 : 11.90
Rated speed rpm rack travel mm Tolerance mm	: 300 : 3.50	Tolerance mm	: + 0.15
Tolerance mm	: ← 0.10	START CUT-OUT	
Rated speed rpm		Rated speed rpm Check	
CRT mm min.	: > 5.50	speed 1/min Rated speed rpm Check	: > 80 : < 220
CONTINUOUS-ACTION	CONTROL	speed 1/min	: < 240
Rated speed rpm	: 375	FUEL DELIVERY CHA	NRACTER1STICS
TORQUE CONTROL		+ Aneroid pressure	
		∔ hPa	: 450
Rated speed rpm rack travel mm	: 550 · 14.80	Rated speed rpm Del. quantity	: 400
Tolerance mm	: ← 0.05	- cm3/1000 strokes - Tolerance	
Rated speed rpm	: 950	+ cm3/1000 strokes	: ← 1.5
Rated speed rpm rack travel mm Tolerance mm	: 14.15 : + 0.10	+ Check tolerance + cm3/1000s.	: +- 4.5
Rated speed rpm	: 860	+ Aneroid pressure	
rack travel mm		+ hPa	: 1200
Tolerance mm	: +- 0.10	+ Rated speed rpm + Del. quantity	: 950
Rated speed rpm rack travel mm	: 14.65	cm3/1000 strokes Tolerance	
Tolerance mm	: +- 0.10	+ cm3/1000 strokes - Check tolerance	: + 2.0
ANEROID/ALTITUDE		cm3/1000s. Spreed	: ← 5.0
COMPENSATOR TEST		Tolerance cm3/1000 strokes	: 8.0
SETTING		+ Check tolerance + cm3/1000s.	: 12.0
Rated speed rpm Pressure hPa		Aneroid pressure	: -
rack travel mm Tolerance mm	: 14.80 : + 0.05	Rated speed rpm Del. quantity	400
MEASUREMENT		cm3/1000 strokes	: 107.0
		•	

Tolerance cm3/1000 strokes : +-1.0 Check tolerance cm3/1000s. 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. 12.0 BREAKAWAY Rack travel in mm : 13.00 Rated speed rpm Tolerance 1/min STARTING FUEL DELIVERY 100 Rated speed rpm 15.30 rack travel mm : +- 0.25 Tolerance mm Del. quantity cm3/1000 strokes : 210.0 Tolerance cm3/1000 strokes : + 20.0Check tolerance cm3/1000s. : + 24.0LOW IDLE Rated speed rpm 300 rack travel mm 5.70 Tolerance mm : +- 0.30 Del. quantity cm3/1000 strokes : 13.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance 8.0 cm3/1000 strokes : Check tolerance cm3/1000s. 10.0

Note remarks

Refer to Service Info for test and adjustment instructions.

See microcard(s) W400/...

Edition : 16.03.95 Test oil : ISO 4113

Combination No. : 0402648996

Injection pump

Pump designation : PE8P120A320LS7839

: -10

EP type number : 0412628855

Governor

Governer design. : RQV300...950PA1199

: -1

Governer no. : 0421814131

Cust. part No. : 0250749702

Customer-spec. information

Customer : MB-NFZ
Motor : 0M442 LA
Power KW : 370.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1417413047

Inlet press. bar : 1.5
Tolerance bar : + 0.1

Overflow quantity

min. l/h : 75 Tolerance l/h : + 10.0

Test nozzle holde

assembly : 1688901105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5 Lube oil : 1409918004

Test lines : 1680750075

Outside diameter : 8.0

x inside diameter: 3.0

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 5.05 Tolerance mm : + 0.05

test only : \leftarrow 0.10

Rack travel in mm : 14.50 Tolerance mm : + 0.50

Firing order : 8-7-2-6-3

: - 5- 4- 1

Phasing : 0-45-90-135-180

: -225-270-315

Tolerance : + 0.30

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 8

BASIC SETTING

Rated speed rpm : 550

F01

	+ guide sleeve
	+ travel mm : 5.23
Rack travel in mm : 15.20 Tolerance mm : + 0.05	Tolerance mm : +- 0.25
Del. quantity	Rated speed rpm : 780 guide sleeve
cm3/1000 strokes : 289.0	travel mm : 6.31 Tolerance mm : + 0.25
Tolerance cm3/1000 strokes : + 1.0	Rated speed rpm : 1092
Check tolerance cm3/1000s. : + 4.0	guide sleeve : 10.00 + Tolerance mm : + 0.25
Spreed	Rated speed rpm : 1190
Tolerance	+ guide sleeve
cm3/1000 strokes : 6.0	travel mm : 11.50 Tolerance mm : + 0.50
Check tolerance cm3/1000s. : 9.0	
	GUIDE SLEEVE POSITION
2nd speed rpm : 300	‡
Rack travel in mm : 5.20	+ control lever
Tolerance mm : + 0.30	<pre>position degree : - 1</pre>
Del. quantity	+ Rated speed rpm : 1030
cm3/1000 strokes : 19.0	Park travel in an a 4/ 20
Tolerance cm3/1000 strokes : + 3.0	Rack travel in mm: 14.20 Tolerance mm: + 1.30
Check tolerance cm3/1000s. : + 6.0	†
Spreed Tolerance	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes : 6.0 Check tolerance	Rated speed rpm : 550 Aneroid pressure
cm3/1000s. : 10.0	hPa : 1200 Del. quantity
(B) SETTING OF INJECTION PUMP	cm3/1000 strokes : 289.0
WITH GOVERNOR	cm3/1000 strokes : +- 1.0 Check tolerance
GUIDE SLEEVE TRAVEL	
COINT OFFERE HAVEE	Tolerance
Rated speed rpm : 300 guide sleeve	cm3/1000 strokes : 6.0 Check tolerance
travel mm : 1.29	+ cm3/1000s. : 9.0
Tolerance mm : + 0.20	
Rated speed rpm : 1009 guide sleeve	RATED SPEED
travel mm : 8.55	+
Tolerance mm : + 0.15	control lever position degree : 123.0
Rated speed rpm : 567 guide sleeve	tolerance degree : +- 4.0
travel mm : 4.66	+ rack travel mm : 14.20
Tolerance mm : +- 0.25	Rated speed rpm : 995
Rated speed rpm : 617	+ Tolerance 1/min : +- 5 +

rack travel mm : 4.00 Rated speed rpm : 1090 Tolerance 1/min : + 15 rack travel mm : 0.75 Tolerance mm : + 0.75 Rated speed rpm : 1250	Pressure hPa : - Rated speed rpm : 400 rack travel mm : 8.25 Tolerance mm : + 0.15 Rated speed rpm : 400 Pressure hPa : 300
LOW IDLE	rack travel mm : 9.95 Tolerance mm : + 0.20
control lever position degree : 79.0 tolerance degree : + 4.0	Pressure hPa : 500 rack travel mm : 11.65 Tolerance mm : + 0.20
Testing:	START CUT-OUT
Rated speed rpm : 300 rack travel mm : 3.50 Tolerance mm : + 0.10 Rated speed rpm : 200	Rated speed rpm : > 190 Check speed 1/min : > 170 Rated speed rpm : < 220 Check speed 1/min : < 240
CRT mm min. :> 6.50	
CONTINUOUS-ACTION CONTROL	FUEL DELIVERY CHARACTER ATICS
Rated speed rpm : 320	Aneroid pressure hPa : 500 Rated speed rpm : 400
TORQUE CONTROL	Del. quantity cm3/1000 strokes : 196.0 Tolerance
Rated speed rpm : 550 rack travel mm : 15.20 Tolerance mm : + 0.05	cm3/1000 strokes : + 1.5 Check tolerance cm3/1000s. : + 4.5
Rated speed rpm : 750 rack travel mm : 15.20 Tolerance mm : + 0.05	Aneroid pressure hPa : 1200 Rated speed rpm : 750 Del. quantity
Rated speed rpm : 950 rack travel mm : 15.20 Tolerance mm : + 0.10	cm3/1000 strokes : 274.5 Tolerance cm3/1000 strokes : + 3.0 Check tolerance
ANEROID/ALTITUDE COMPENSATOR TEST	cm3/1000s. : +- 6.0 Aneroid pressure
SETTING	hPa : 1200 Rated speed rpm : 950 Del. quantity
Rated speed rom : 400	cm3/1090 strokes : 271.0 Tolerance
Pressure hPa : 1200 + rack travel mm : 15.20 + Tolerance mm : + 0.05	cm3/1000 strokes : +- 3.0 Check tolerance cm3/1000s. : +- 6.0
MEASUREMENT : TO U.US	Aneroid pressure
+	hPa : -

500 Rated speed rpm Del. quantity cm3/1000 strokes : 136.0 Tolerance cm3/1000 strokes : +-1.0 Check tolerance cm3/1000s. 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. 12.0 **BREAKAWAY** 14.20 Rack travel in mm: Rated speed rpm : Tolerance 1/min STARTING FUEL DELIVERY 100 Rated speed rpm Del. quantity cm3/1000 strokes : 255.0 Tolerance cm3/1000 strokes : +- 20.0 Check tolerance cm3/1000s.: **←** 24.0 LOW IDLE Rated speed rpm 300 rack travel mm 5.20 0.30 Tolerance mm Del. quantity cm3/1000 strokes : 19.0 Tolerance cm3/1000 strokes 3.0 Check tolerance cm3/1000s. : +-6.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s.10.0

Note remarks

Refer to Service Info for test and adjustment instructions.

See microcard(s) W400/...

: 17.03.95 Edition Test oil : ISO 4113

Combination No. : 0402648997

Injection pump

Pump designation : PE8P120A320LS7838

: -10

EP type number : 0412628854

Governor

Governer design. : RQ300/950PA993-12

Governer no. : 0421801776

Cust. part No. : 0260740402

Customer-spec. information : MB-NFZ Customer : 0M442 LA Motor Power KW : 320.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 1417413047

Inlet press. bar : : +-Tolerance bar 1.0

Tolerance l/h: + 10.0

Test nozzle holde

assembly : 1688901105

Opening pressure

208.5 bar : +- 1.5 Tolerance bar

: 1409918004 Lube oil

Test lines : 1680750075

Outside diameter : 8.0

x inside diameter: 3.0 : 1000 x length mm

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 26.0 Tolerance bar : +- 1.0

Prestroke mm 5.25 : +- 0.05 Tolerance mm

test only : +- 0.10

Rack travel in mm : 20.50 : +- 0.50 Tolerance mm

: 8-7-2-6-3 :-5-4-1 Firing order

Phasing : 0-45-90-135-180

: -225-270-315

: + 0.30 Tolerance

Check

: + 0.75tolerance °NW

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 8

BASIC SETTING

Rated speed rpm : 550

Rack travel in m		+ guide sleeve + travel mm : 4.91
Tolerance mm	: + 0.05	+ Tolerance mm : + 0.10
Del. quantity cm3/1000 strokes	: 254.0	Rated speed rpm : 500 guide sleeve
Tolerance cm3/1000 strokes	: + 1.0	travel mm : 6.00 Tolerance mm : + 0.10
Check tolerance		Rated speed rpm : 1170 guide sleeve
cm3/1000s.	: + 4.0	travel mm : 11.50 Tolerance mm : + 0.50
Spreed Tolerance		
cm3/1000 strokes	: 6.0	GUIDE SLEEVE POSITION
Check tolerance cm3/1000s.	: 9.0	Rated speed rpm : 600
2nd annual nam	. 700	Rack travel in mm: 20.00
2nd speed rpm	: 300	+ Tolerance mm : + 0.80
Rack travel in m		FIRE LOAD DELTUEDY AT FIRE LOAD GTOD
Tolerance mm Del. quantity	: + 0.30	+ FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes	: 19.0	Rated speed rpm : 550
Tolerance	- 1 30	+ Aneroid pressure
cm3/1000 strokes Check tolerance	: + 3.0	+ hPa : 1000 + Del. quantity
cm3/1000s.	: + 6.0	+ cm3/1000 strokes : 254.0
Spreed		† Tolerance
Tolerance		+ cm3/1000 strokes : +- 1.0
cm3/1000 strokes Check tolerance	: 6.0	+ Check tolerance + cm3/1000s. : + 4.0
cm3/1000s.	: 10.0	+ Spreed
		+ Tolerance
(D) OFFTING OF TH	LICOTTON DUMP	+ cm3/1000 strokes : 6.0
(B) SETTING OF IN WITH GOVERNOR	NJECTION PUMP	+ Check tolerance + cm3/1000s. : 9.0
WITH GOTEMION		1
GUIDE SLEEVE TRAV	/EL	RATED SPEED
Detroil aread are	. 700	†
Rated speed rpm guide sleeve	: 300	T control lever
travel mm	: 2.14	position degree : 99.0
Tolerance mm	: + 0.10	tolerance degree : + 4.0
Rated speed rpm	: 1005	rack travel mm : 14.00
guide sleeve travel mm	: 6.35	+ Rated speed rpm : 998 + Tolerance 1/min : + 8
Tolerance mm	: + 0.10	Tolerance 1/min : + 8
		rack travel mm : 4.00
Rated speed rpm guide sleeve	: 950	+ Rated speed rpm : 1090 + Tolerance 1/min : +- 15
travel mm	: 6.00	Total differ (vinite)
Tolerance mm	: ← 0.10	rack travel mm : 0.75
Datai anaad muu		+ Tolerance mm : +- 0.75
Rated speed rpm	: 414	Rated speed rpm : 1200

		1	Tolerand
LOW IDLE		Ŧ	
control lever		1	START CU
position degree tolerance degree	: 71.0	+	Rated sp
tolerance degree	: +- 4.0	+	Check
Testing:		†	speed 1/ Rated sp
resting.		I	Check
Rated speed rpm	: 300	1	speed 1/
rack travel mm Tolerance mm	: 3.70 : + 0.10	┆╸╏╸╏╸╏╸╏╸╏╸╏╸╏╸╏╸╏╸╏╸╏╸╏╸╏╸╏╸╏╸╏╸╏╸	
locel diffe ligh	. + 0.10	Ţ	FUEL DEL
rack travel mm	: 2.00	+	
Rated speed rpm Tolerance 1/min		†	Aneroid hPa
TOTAL ALIVE TAINTI	. +- 20	I	Rated sp
Rated speed rpm	: 200	+	Del. qua
		+	cm3/1000
CRT man min.	: > 5.70	+	Tolerand
		 †	cm3/1000
TORQUE CONTROL		I	Check to cm3/1000
TORGOE CONTROL		Ţ	CIRS7 1000
Rated speed rpm	: 550	+	Aneroid
rack travel mm	: 15.00	+	hPa
Tolerance mm	: ← 0.05	†	Rated sp
Rated speed rom	• 950	Ι	Del. qua cm3/1000
Rated speed rpm rack travel mm	: 15.00	1	Tolerand
Tolerance mm	: + 0.10	+	cm3/1000
		+	Check to
ANEDOTO / AL TITUDE		†	cm3/1000
ANEROID/ALTITUDE COMPENSATOR TEST		Ī	Spreed Tolerance
		1	cm3/1000
		+	Check to
SETTING		+	cm3/1000
Rated speed rpm	: 400	Į	Aneroid
Pressure hPa	: 1000	+	hPa
rack travel mm	: 15.00	†	Rated spe
Tolerance mm	: + 0.05	İ	Del. quan cm3/1000
MEASUREMENT		I	Tolerance
TIESTOONES IETT		1	cm3/1000
Pressure hPa	: -	+	Check to
Rated speed rpm	: 400	+	cm3/1000s
rack travel mm Tolerance mm	: 9.10 : +- 0.15	1	Spreed Tolerance
TO LET ANCE THE	. +- 0.15	I	cm3/1000
Rated speed rpm	: 400	┍╋╇╇╇╇╇╇╇╇╇╇╇╇	Check tol
		+	cm3/10008
Pressure hPa	: 250	†	
rack travel mm Tolerance mm	: 10.95 : + 0.20	İ	BREAKAWAY
TOTALLE IIII	. 1- 0.20	I	DUFUL WAY!
Pressure hPa	: 550	+	
	-	•	

rack travel mm Tolerance mm	: 13.85 : +- 0.15
START CUT-OUT	
Rated speed rpm Check	: > 100
speed 1/min Rated speed rpm	: > 80 : < 220
Check speed 1/min	: < 240
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure	
hPa Rated speed rpm Del. quantity	: 550 : 400
cm3/1000 strokes Tolerance	: 209.0
cm3/1000 strokes Check tolerance	: +- 1.5
cm3/1000s.	: +- 4.5
Aneroid pressure hPa Rated speed rpm	: 1u00 : 950
Del. quantity cm3/1000 strokes	: 242.0
Tolerance cm3/1000 strokes Check tolerance	: ← 3.0
cm3/1000S. Spreed	: +- 6.0
Tolerance cm3/1000 strokes	: 8.0
Check tolerance cm3/1000s.	: 12.0
Aneroid pressure	
Rated speed rpm Del. quantity	: 500
cm3/1000 strokes Tolerance	: 135.0
cm3/1000 strokes Check tolerance	: + 1.0
cm3/1000s. Spreed	: +- 4.0
Tolerance cm3/1000 strokes	: 8.0
Check tolerance cm3/1000s.	: 12.0
BREAKAWAY	

14.00 Rack travel in mm: Rated speed rpm : Tolerance 1/min : +-

STARTING FUEL DELIVERY

Rated speed rpm 100

Del. quantity

cm3/1000 strokes : 235.0

Tolerance

cm3/1000 strokes : + 20.0

Check tolerance cm3/1000s. : + 24.0

LOW IDLE

cm3/1000s.

Rated speed rpm 300 6.10 rack travel mm Tolerance mm : +- 0.30 Del. quantity cm3/1000 strokes : 19.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance

10.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 20.03.95 Edition Test oil : ISO 4113

Combination No. : 0402666802

Injection pump

Pump designation : PE6P120A320/3LS7883

EP type number : 0412626938

Governor

Governer design. : RSV600...1050P0A591

Governer no. : 0421833457

Cust. part No. : 0250746802

Customer-spec. information Customer : MB-NFZ Motor : OM 401 LA

Power KW : 213.0

TEST BENCH REQUIREMENTS

Test oil inlet

40 temp. °C Tolerance °C 2.0

Overflow valve : 1417413047

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Tolerance l/h: + 10.0

Test nozzle holde

assembly : 1688901105

Opening pressure

: 208.5 bar Tolerance bar : +- 1.5

Test lines : 1680750075

Outside diameter : 8.0

x inside diameter : 3.0 x Length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 5.25 Tolerance mm : + 0.05

test only : +- 0.10

Rack travel in mm: 20.50 Tolerance mm : \leftarrow 0.50

Firing order : 6-3-5-2-4-: 1

Phasing : 0-60-120-180-240

: -300

: **←** 0.30 Tolerance

Check

tolerance "NW : **←** 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 6

BASIC SETTING

Rated speed rpm : 1030

Rack travel in mm : 12.40 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 202.0

Tolerance cm3/1000 strokes : + 1.0	Check tolerance cm3/1000s. : +- 4.0 Spreed
Check tolerance cm3/1000s. : + 4.0	Tolerance cm3/1000 strokes : 6.0 Check tolerance
Spreed Tolerance cm3/1000 strokes : 6.0	cm3/1000s. : 9.0
Check tolerance cm3/1000s. : 9.0	RATED SPEED
2nd speed rpm : 600	control lever position degree : 88.0
Rack travel in mm: 3.80 + Tolerance mm: + 0.30 +	tolerance degree : +- 4.0
Del. quantity cm3/1000 strokes : 13.0	LOW IDLE
Tolerance + cm3/1000 strokes : + 3.0 + Check tolerance +	control lever position degree : 71.0
cm3/1000S. : +- 6.0 +- Spreed +- Tolerance	tolerance degree : +- 4.0 Testing:
cm3/1000 strokes : 8.0 + Check tolerance +	Rated speed rpm : 70
cm3/1000s. : 12.0	rack travel mm : 3.80 Tolerance mm : + 0.10
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	rack travel mm : 2.00 Rated speed rpm : 630 Tolerance 1/min : +- 30
GUIDE SLEEVE POSITION	Rated speed rpm : 100
Ţ	CRT mm min. : > 19.50
control lever + position degree : - 3 +	SET IDLE AUXILIARY SPRING
Rated speed rpm : 800	rack travel mm : 2.00
Rack travel in mm: 0.50 Tolerance mm: + 0.20	TORQUE CONTROL
governor spring pre-tension click setting x : 1.50	Rated speed rpm : 1030 rack travel mm : 12.40 Tolerance mm : +- 0.05
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 700 rack travel mm : 12.40 Tolerance mm : +- 0.10
Rated speed rpm : 1030 Aneroid pressure	roterance mm : +- U.IU
hPa : - + Del. quantity +	
cm3/1000 strokes : 202.0	FUEL DELIVERY CHARACTERISTICS
cm3/1000 strokes : +- 1.0	Aneroid pressure hPa : –

700 Rated speed rpm :

Del. quantity

cm3/1000 strokes : 201.5

Tolerance

cm3/1000 strokes : ← 3.0

Check tolerance

cm3/1000s. 6.0

STARTING FUEL DELIVERY

Rated speed rpm 100

Del. quantity

cm3/1000 strokes : 180.0

Tolerance

cm3/1000 strokes : + 10.0

Check tolerance cm3/1000s.

: +- 14.0

LOW IDLE

600 Rated speed rpm rack travel mm 3.80 Tolerance mm 0.30

Del. quantity

13.0

cm3/1000 strokes : Tolerance

cm3/1000 strokes : +-3.0

Check tolerance cm3/1000s.

6.0

Spreed

Tolerance

cm3/1000 strokes :

8.0

Check tolerance

cm3/1000s. 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 12.12.94 Test oil : ISO 4113

Combination No. : 0402736859

Injection pump

Pump designation : PES6P120A120RS7261

EP type number : 0412726876

Governor

Governer design. : RQV350...1100PA924

: -10K

Governer no. : 0421815429

Cust. part No. : 3282465

Customer—spec. information Customer : CUMMINS Motor : 6CTAA Power KW : 176.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1417413047

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1688901101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1680750008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 18.0 Tolerance bar : + 1.0

Prestroke mm : 3.55
Tolerance mm : + 0.05

test only : \leftarrow 0.10

Rack travel in mm : 1.50
Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.30

Check

tolerance *NW : + 0.50

BEGINNING OF DELIVERY DIFFERENCE

S.o.d. blocking

Barrel no. :

*NW after s.o.d. : 7.0 Tolerance : + 0.10

Check

tolerance $^{\circ}NW$: \leftarrow 0.23

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 10.85 Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 145.0	Spreed Tolerance
Tolerance	cm3/1000 strokes : 5.0 Check tolerance
	cm3/1000s. : 9.0
Check tolerance cm3/1000s. : +- 4.0	RATED SPEED
Spreed	
Tolerance cm3/1000 strokes : 5.0	control lever position degree : 113.0 tolerance degree : +- 4.0
Check tolerance cm3/1000s. : 9.0	rack travel mm : 9.80
2nd speed rpm : 350	Rated speed rpm : 1145 Tolerance 1/min : +- 5
Rack travel in mm: 5.10	mode document of 700
Tolerance mm : + 0.30	rack travel mm : 4.00
Del. quantity	Rated speed rpm : 1255 Tolerance 1/min : + 15
cm3/1000 strokes : 26.0	Toterance Timin : +- 15
Tolerance	rack travel mm : 0.50
cm3/1000 strokes : + 3.0	Tolerance mm : + 0.50
Check tolerance	Rated speed rpm : 1350
cm3/1000s. : + 5.0	nated speed i pile : 1556
Spreed	
Tolerance	LOW IDLE
cm3/1000 strokes : 7.0	
Check tolerance	
cm3/1000s. : 11.0	control lever
+	position degree : 68.0
+	tolerance degree : +- 4.0
(B) SETTING OF INJECTION PUMP	
WITH GOVERNOR	Testing:
	Datad arread mm
	Rated speed rpm : 350 rack travel mm : 5.10
GUIDE SLEEVE POSITION	Tolerance mm : + 0.10
T	roter arice like
control lever	Rated speed rpm : 250
position degree : -1	CRT mm min. : > 6.60
Rated speed rpm : 1400	
3	
Rack travel in mm: 9.00	CONTINUOUS-ACTION CONTROL
Tolerance mm : + 3.00	Rated speed rpm : 400
FILL LOAD DELTIFON AT FULL LOAD OFF	
FULL LOAD DELIVERY AT FULL LOAD STOP	TORQUE CONTROL
Rated speed rpm : 1100	
Aneroid pressure	Rated speed rpm : 1100
hPa : 900	rack travel mm : 10.85
Del. quantity	Tolerance mm : +- 0.05
cm3/1000 strokes : 145.0	Poted speed pro
Tolerance + cm3/1000 strokes : + 1.0 +	Rated speed rpm : 700
cm3/1000 strokes : + 1.0 + Check tolerance	rack travel mm : 10.00 Tolerance mm : +- 0.10
cm3/1000s. : +- 4.0	TO CET OF THE THE TANK THE TAN
UIID/ 10003. , T 4.0 T	

Rated speed rpm rack travel mm Tolerance mm	: 10.35	Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0
Rated speed rpm rack travel mm Tolerance mm	: 9.15	Aneroid pressure hPa : - Rated speed rpm : 500
ANEROID/ALTITUDE COMPENSATOR TEST		+ Del. quantity + cm3/1000 strokes : 107.0 + Tolerance + cm3/1000 strokes : + 2.0 + Check tolerance
SETTING		t cm3/1000s. : ← 4.0
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 900 : 10.85	BREAKAWAY
MEASUREMENT		+ Rack travel in mm : 9.80 + Rated speed rpm : 1145 + Tolerance 1/min : +- 5
Pressure hPa Rated speed rpm rack travel mm	: 7.70	<u> </u>
Tolerance mm	: ← 0.10	+ STARTING FUEL DELIVERY
Rated speed rpm	: 1100	+ Rated speed rpm : 100 + Del. quantity
Pressure hPa rack travel mm Tolerance mm	: 320 : 8.50 : ← 0.20	- cm3/1000 strokes : 265.0 - Tolerance - cm3/1000 strokes : +- 15.0
Pressure hPa rack travel mm Tolerance mm	: 560 : 10.25 : + 0.05	+ Check tolerance - cm3/1000s. : + 19.0
START CUT-OUT		LOW IDLE
Rated speed rpm Check speed 1/min Rated speed rpm Check speed 1/min	: > 100 : > 80 : < 270 : < 290	Rated speed rpm : 350 rack travel mm : 5.10 Tolerance mm : + 0.30 Del. quantity cm3/1000 strokes : 26.0 Tolerance cm3/1000 strokes : + 3.0
FUEL DELIVERY CHA	IDACTEDISTICS	+ Check tolerance + cm3/1000s. : + 5.0
	INACTENESTES	Spreed Tolerance
Aneroid pressure hPa	: 900	+ cm3/1000 strokes : 7.0
Rated speed rpm Del. quantity cm3/1000 strokes	: 700 : 150.0	- Check tolerance cm3/1000s. : 11.0
Tolerance cm3/1000 strokes Check tolerance	: +- 3.0	-
cm3/1000s. Spreed	: ← 6.0	‡

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 21.03.95 Test oil : ISO 4113

Combination No. : 0402746953

Injection pump

Pump designation : PES6P120A320RS7294

EP type number : 0412726895

Governor

Governer design. : RQV275...1000PA1001

: -1

Governer no. : 0421813936

Cust. part No. : CCEP-5135 66-213

Customer-spec. information

Customer : RVI

Motor : MIDR 063540 J/3

Power KW : 306.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2417413071

Inlet press. bar : 2.5
Tolerance bar : + 0.1

Test nozzle holde

assembly : 1688901105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Lube oil : 1409918004

Test Lines : 1680750089

Outside diameter : 8.0

x inside diameter: 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.55
Tolerance mm : +- 0.05

test only : \leftarrow 0.10

Rack travel in mm : 13.50 Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.30

Check

tolerance °NW : + 0.50

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 1

BASIC SETTING

Rated speed rpm : 600

Rack travel in mm: 13.80

Tolerance mm : + 0.05 +	
No.	Rated speed rpm : 393
Del. quantity cm3/1000 strokes : 310.0	guide sleeve travel mm : 2.99
	Tolerance mm : + 0.20
Tolerance	
cm3/1000 strokes : +- 1.0	Rated speed rpm : 490 guide sleeve
Check tolerance	travel mm : 3.81
cm3/1000s. : + 4.0	Tolerance mm : +- 0.20
Spreed	Datad around now a 1770
Tolerance	Rated speed rpm : 1370 guide sleeve
cm3/1000 strokes : 5.0	travel mm : 11.50
	Tolerance mm : \leftarrow 0.50
Check tolerance + cm3/1000s. : 9.0	
T	GUIDE SLEEVE POSITION
2nd speed rpm : 300	
Rack travel in mm: -8.60	control lever
Tolerance mm : + 0.20	position degree : - 1
Del. quantity	Rated speed rpm : 1185
cm3/1000 strokes : 31.0	
Tolerance + 2.0	Rack travel in mm : 12.60 Tolerance mm : +- 1.30
Check tolerance	roceratice inti
cm3/1000s. : +- 6.0	
Spreed +	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance + cm3/1000 strokes : 8.0	Rated speed rpm : 600
Check tolerance	Aneroid pressure
cm3/1000s. : 12.0	hPa : 1000
†	Del. quantity
(B) SETTING OF INJECTION PUMP	cm3/1000 strokes : 310.0 Tolerance
WITH GOVERNOR	cm3/1000 strokes : + 1.0
+	Check tolerance
GUIDE SLEEVE TRAVEL	cm3/1000s. : +- 4.0
GOIDE SCEEVE TRAVEL	Spreed Tolerance
Rated speed rpm : 275	cm3/1000 strokes : 5.0
guide sleeve	Check tolerance
travel mm : 1.29 + Tolerance mm : + 0.10 +	cm3/1000s. : 9.0
Total directions	
Rated speed rpm : 1086	RATED SPEED
guide steeve + travel mm : 8.46 +	
Tolerance mm : + 0.10	control lever
+	position degree : 302.0
Rated speed rpm : 773	tolerance degree : +- 4.0
guide sleeve + travel mm : 6.09 +	rack travel mm : -1.00
Tolerance mm : +- 0.20	Rated speed rpm : 1070
+	Tolerance 1/min : +- 5
Rated speed rpm : 343	mode through my
guide sleeve + travel mm : 2.33 +	rack travel mm : -9.70 Rated speed rpm : 1210
Tolerance mm : + 0.20	Tolerance 1/min : +- 15
	- · · · · · · · · · · · · · · · · · · ·

		+ rack travel mm	: -3.80
rack travel mm Tolerance mm		† Tolerance mm	: + 0.20
Rated speed rpm		Pressure hPa	: 600
,		rack travel mm	: -0.95
LOW IDLE		Tolerance mm	: + 0.05
LOW IDEL		Ţ 	
control lever		START CUT-OUT	
position degree	: 246.0	Rated speed rpm	: > 100
tolerance degree	: + 4.0	+ Check	
		+ speed 1/min + Rated speed rpm	: > 80
Testing:		+ Rated speed rpm	: < 225
Dated around are	. 700	- Check	2/5
Rated speed rpm		speed 1/min	: < 245
rack travel mm Tolerance mm	+- 0.00	İ	
TO COT GITCO TIME	0.10	FUEL DELIVERY CHAP	PACTERISTICS
Rated speed rpm	: 200	+	MOTERIE
CRT mm max.	7 20	Aneroid pressure	. 1000
CKI ONE MAX.	. \ -1.20	† hPa Rated speed rpm	: 1000
		Del. quantity	. 1000
CONTINUOUS-ACTION	CONTROL	+ cm3/1000 strokes	: 287.0
		Tolerance	23.72
Rated speed rpm	: 370	+ cm3/1000 strokes	: ← 3.0
		+ Check tolerance	
TORQUE CONTROL			: + 6.0
TOTAGE CONTINUE		Aneroid pressure	
Rated speed rpm	: 600	+ hPa	: 1000
		+ Rated speed rpm	: 500
Rated speed rpm		+ Del. quantity	
Tolerance mm	: ← 0.10	+ cm3/1000 strokes	: 138.0
Datad anood nam	. 500	+ Tolerance + cm3/1000 strokes	. + 50
Rated speed rpm rack travel mm		+ Check tolerance	: + 5.0
Tolerance mm		- cm3/1000s.	: + 8.0
	3.10	Spreed	· • • • • • • • • • • • • • • • • • • •
		Tolerance	
ANEROID/ALTITUDE		+ cm3/1000 strokes	: 8.0
COMPENSATOR TEST		+ Check tolerance	40.5
		t cm3/1000s.	: 12.0
SETTING		Aneroid pressure	
· -··-		+ hPa	: -
Rated speed rpm	: 500	+ Rated speed rpm	: 500
Pressure hPa	: 1000	+ Del. quantity	
		cm3/1000 strokes	: 152.0
MEASUREMENT		+ Tolerance	
Pressure hPa		+ cm3/1000 strokes + Check tolerance	: + 1.0
Pressure nra Rated speed rpm	500	+ check toterance + cm3/1000s.	: +- 4.0
rack travel mm	: -5.00	- CIII3/10003.	• • •••
Tolerance mm	: +- 0.20		
		BREAKAWAY	
Rated speed rpm	: 500	†	
Pressure hPa	: 240	+ Rack travel in mm	: -1.00
-	- · •	,	

Rated speed rpm : 1070 Tolerance 1/min : +-

STARTING FUEL DELIVERY

Del. quantity

cm3/1000 strokes : 160.0

Tolerance

cm3/1000 strokes : \leftarrow 10.0

Check tolerance

cm3/1000s. : +- 14.0

LOW IDLE

300 Rated speed rpm rack travel mm -8.60 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 31.0 Tolerance cm3/1000 strokes : +-2.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s.

12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 22.03.95 : ISO 4113 Test oil

Combination No. : 0402746993

Injection pump

Pump designation : PES6P120A720LS7341

EP type number : 0412726913

Governor

Governer design. : RQV350...1150PA1159

Governer no. : 0421814099

Cust. part No. : 0250742302

Customer-spec. information Customer : MTU Motor : 6-R-183 Power KW : 440.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 1417413025

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Overflow quantity

90 min. L/h min. L/h : 90 Tolerance l/h : + 10.0

Test nozzle holde

: 1688901105 assembly

Opening pressure

208.5 Tolerance bar : +- 1.5

: 1409918004 Lube oil

Test lines : 1680750075

Outside diameter : 8.0

x inside diameter: 3.0

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

: '.05 Prestroke mm : ← 0.05 Tolerance mm

test only : \leftarrow 0.10

Rack travel in mm: 20.50 Tolerance mm : \leftarrow 0.50

Firing order : 6-2-4-1-5-

: 3

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.30

Check

tolerance °NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 6

BASIC SETTING

Rated speed rpm : 600

Rack travel in mm: 10.20 Tolerance mm : + 0.05

	Detect and and the second seco
Del. quantity	+ Rated speed rpm : 466
cm3/1000 strokes : 273.0	+ guide sleeve + travel mm : 3.35
CIID7 1000 Strokes . 273.0	+ Tolerance mm : + 0.25
Tolerance	
cm3/1000 strokes : +- 1.0	Rated speed rpm : 600
CIID 1000 301 0RC3 . 1 1.0	+ guide sleeve
Check tolerance	travel mm : 3.83
cm3/1000s. : +- 4.0	+ Tolerance mm : + 0.25
110	1000, 01,000, 1811
Spreed	+ Rated speed rpm : 1308
Tolerance	+ guide sleeve
cm3/1000 strokes : 6.0	+ travel mm : 10.00
	+ Tolerance mm : + 0.25
Check tolerance	+
cm3/1000s. : 9.0	+ Rated speed rpm : 1410
	+ guide sleeve
2nd speed rpm : 350	+ travel mm : 11.50
	+ Tolerance mm : +- 0.50
Rack travel in mm : 4.10	+
Tolerance mm : + 0.30	
Del. quantity	+ GUIDE SLEEVE POSITION
cm3/1000 strokes : 17.0	†
Tolerance	†
cm3/1000 strokes : +- 3.0	t control lever
Check tolerance	+ position degree : -1 + Rated speed rpm : 1740
cm3/1000s. : +- 6.0 Spreed	Rated speed rpm : 170
Tolerance	T Rack travel in mm: 13.00
cm3/1000 strokes : 8.0	+ Rack travel in mm : 13.00 + Tolerance mm : +- 1.30
Check tolerance	T Total Reliant . The 1.50
cm3/1000s. : 12.0	
12.5	FULL LOAD DELIVERY AT FULL LOAD STOP
12.0	FULL LOAD DELIVERY AT FULL LOAD STOP
	+
(B) SETTING OF INNECTION PUMP	Rated speed rpm : 600
	Rated speed rpm : 600 Aneroid pressure
(B) SETTING OF INNECTION PUMP	Rated speed rpm : 600 Aneroid pressure hPa : 800
(B) SETTING OF INNECTION PUMP	Rated speed rpm : 600 Aneroid pressure
(B) SETTING OF INNECTION PUMP WITH GOVERNOR	Rated speed rpm : 600 Aneroid pressure hPa : 800 Del. quantity
(B) SETTING OF INNECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 350	Rated speed rpm : 600 Aneroid pressure hPa : 800 Del. quantity cm3/1000 strokes : 273.0 Tolerance cm3/1000 strokes : + 1.0
(B) SETTING OF INNECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve	Rated speed rpm : 600 Aneroid pressure hPa : 800 Del. quantity cm3/1000 strokes : 273.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance
(B) SETTING OF INNECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.53	Rated speed rpm : 600 Aneroid pressure hPa : 800 Del. quantity cm3/1000 strokes : 273.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0
(B) SETTING OF INNECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve	Rated speed rpm : 600 Aneroid pressure hPa : 800 Del. quantity cm3/1000 strokes : 273.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed
(B) SETTING OF INVECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.53 Tolerance mm : + 0.15	Rated speed rpm : 600 Aneroid pressure hPa : 800 Del. quantity cm3/1000 strokes : 273.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance
(B) SETTING OF INVECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.53 Tolerance mm : + 0.15 Rated speed rpm : 1206	Rated speed rpm : 600 Aneroid pressure hPa : 800 Del. quantity cm3/1000 strokes : 273.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0
(B) SETTING OF INNECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.53 Tolerance mm : + 0.15 Rated speed rpm : 1206 guide sleeve	Rated speed rpm : 600 Aneroid pressure hPa : 800 Del. quantity cm3/1000 strokes : 273.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance
(B) SETTING OF INNECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.53 Tolerance mm : + 0.15 Rated speed rpm : 1206 guide sleeve travel mm : 8.35	Rated speed rpm : 600 Aneroid pressure hPa : 800 Del. quantity cm3/1000 strokes : 273.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0
(B) SETTING OF INNECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.53 Tolerance mm : + 0.15 Rated speed rpm : 1206 guide sleeve	Rated speed rpm : 600 Aneroid pressure hPa : 800 Del. quantity cm3/1000 strokes : 273.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance
(B) SETTING OF INNECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.53 Tolerance mm : + 0.15 Rated speed rpm : 1206 guide sleeve travel mm : 8.35 Tolerance mm : + 0.20	Rated speed rpm : 600 Aneroid pressure hPa : 800 Del. quantity cm3/1000 strokes : 273.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000 strokes : 9.0
(B) SETTING OF INNECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.53 Tolerance mm : + 0.15 Rated speed rpm : 1206 guide sleeve travel mm: : 8.35 Tolerance mm : + 0.20 Rated speed rpm : 950	Rated speed rpm : 600 Aneroid pressure hPa : 800 Del. quantity cm3/1000 strokes : 273.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance
(B) SETTING OF INNECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.53 Tolerance mm : + 0.15 Rated speed rpm : 1206 guide sleeve travel mm: : 8.35 Tolerance mm : + 0.20 Rated speed rpm : 950 guide sleeve	Rated speed rpm : 600 Aneroid pressure hPa : 800 Del. quantity cm3/1000 strokes : 273.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000 strokes : 9.0
(B) SETTING OF INNECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.53 Tolerance mm : + 0.15 Rated speed rpm : 1206 guide sleeve travel mm : 8.35 Tolerance mm : + 0.20 Rated speed rpm : 950 guide sleeve travel mm : 5.78	Rated speed rpm : 600 Aneroid pressure hPa : 800 Del. quantity cm3/1000 strokes : 273.0 Tolerance cm3/1000s trokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 9.0
(B) SETTING OF INNECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.53 Tolerance mm : + 0.15 Rated speed rpm : 1206 guide sleeve travel mm: : 8.35 Tolerance mm : + 0.20 Rated speed rpm : 950 guide sleeve	Rated speed rpm : 600 Aneroid pressure hPa : 800 Del. quantity cm3/1000 strokes : 273.0 Tolerance cm3/1000strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED
(B) SETTING OF INNECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.53 Tolerance mm : 40.15 Rated speed rpm : 1206 guide sleeve travel mm : 8.35 Tolerance mm : 40.20 Rated speed rpm : 950 guide sleeve travel mm : 5.78 Tolerance mm : 5.78 Tolerance mm : 40.25	Rated speed rpm : 600 Aneroid pressure hPa : 800 Del. quantity cm3/1000 strokes : 273.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever position degree : 120.0
(B) SETTING OF INNECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.53 Tolerance mm : 1206 guide sleeve travel mm : 8.35 Tolerance mm : 8.35 Tolerance mm : 40.20 Rated speed rpm : 950 guide sleeve travel mm : 5.78 Tolerance mm : 416	Rated speed rpm : 600 Aneroid pressure hPa : 800 Del. quantity cm3/1000 strokes : 273.0 Tolerance cm3/1000strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED
(B) SETTING OF INNECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.53 Tolerance mm : 1206 guide sleeve travel mm : 8.35 Tolerance mm : 8.35 Tolerance mm : 40.20 Rated speed rpm : 950 guide sleeve travel mm : 5.78 Tolerance mm : + 0.25 Rated speed rpm : 416 guide sleeve	Rated speed rpm : 600 Aneroid pressure hPa : 800 Del. quantity cm3/1000 strokes : 273.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever position degree : 120.0 tolerance degree : + 4.0
(B) SETTING OF INNECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.53 Tolerance mm : 406 guide sleeve travel mm : 8.35 Tolerance mm : 4.206 guide sleeve travel mm : 8.35 Tolerance mm : 5.78 Tolerance mm : 5.78 Tolerance mm : 416 guide sleeve travel mm : 416 guide sleeve travel mm : 2.77	Rated speed rpm : 600 Aneroid pressure hPa : 800 Del. quantity cm3/1000 strokes : 273.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED RATED SPEED rack travel mm : 13.50
(B) SETTING OF INNECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.53 Tolerance mm : 1206 guide sleeve travel mm : 8.35 Tolerance mm : 8.35 Tolerance mm : 40.20 Rated speed rpm : 950 guide sleeve travel mm : 5.78 Tolerance mm : + 0.25 Rated speed rpm : 416 guide sleeve	Rated speed rpm : 600 Aneroid pressure hPa : 800 Del. quantity cm3/1000 strokes : 273.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever position degree : 120.0 tolerance degree : + 4.0

rack travel mm Rated speed rpm Tolerance 1/min	: 1300	† †	Pressure hPa rack travel mm Tolerance mm	
rack travel mm Tolerance mm Rated speed rpm	: 0.75 : +- 0.75	+	Pressure hPa rack travel mm Tolerance mm	: 400 : 9.10 : + 0.10
LOW IDLE		‡	Pressure hPa rack travel mm Tolerance mm	: 11.70
control lever position degree tolerance degree	: 65.0 : +- 4.0	+++++++++++++++++++++++++++++++++++++++	Pressure hPa rack travel mm Tolerance mm	• 1700
Testing:		Ŧ	START CUT-OUT	
Rated speed rpm rack travel mm Tolerance mm	: 4.10 : + 0.10	† † †	Rated speed rpm Check speed 1/min Rated speed rpm	: > 200
Rated speed rpm		‡	Check speed 1/min	: < 290
CRT mm min.	: > 5.60	‡		DAGTED: 077.00
CONTINUOUS-ACTION	CONTROL	+	FUEL DELIVERY CHA	RACIERISTICS
Rated speed rpm	: 425	†	Aneroid pressure hPa Rated speed rpm	: 2000 : 1150
TORQUE CONTROL		1	Del. quantity cm3/1000 strokes Tolerance	: 344.0
Rated speed rpm rack travel mm Tolerance mm	: 10.20	Ŧ	cm3/1000 strokes Check tolerance cm3/1000s.	
Rated speed rpm rack travel mm Tolerance mm	: 1150 : 14.50 : + 0.10	-	Spreed Tolerance cm3/1000 strokes Check tolerance	
Rated speed rpm rack travel mm Tolerance mm	: 800 : 14.50 : + 0.10	†	cm3/1000S. Aneroid pressure hPa	: 14.0
ANEROID/ALTITUDE	·	 ‡	Rated speed rpm Del. quantity cm3/1000 strokes	: 500 : 127.0
COMPENSATOR TEST		Ī	Tolerance cm3/1000 strokes	
MEASUREMENT		‡	Check tolerance cm3/1000s.	: + 4.0
Pressure hPa Rated speed rpm rack travel mm Tolerance mm		† † † †	BREAKAWAY Rack travel in mm Rated speed rpm	
		•	see abass thu	- 117

Tolerance 1/min : +-5 STARTING FUEL DELIVERY Rated speed rom 100 Del. quantity cm3/1000 strokes : 420.0 Tolerance cm3/1000 strokes : + 20.0 Check tolerance cm3/1000s. : + 24.0LOW IDLE Rated speed rpm 350 4.10 rack travel mm Tolerance mm : **←** 0.30 Del. quantity cm3/1000 strokes : 17.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. 6.0 : +-Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance 12.0 cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 22.03.95 Test oil : ISO 4113

Combination No. : 0403244045

Injection pump

Pump designation : PES4MW100/720RS1524

EP type number : 0413204021

Governor

Governer design. : RQV300...1300MW132

: -12

Governer no. : 0420083329

Cust. part No. : 0240740902

Customer—spec. information Customer : MB-NFZ

Motor : 0M364LA Power KW : 77.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40 Tolerance °C : + 2.0

Overflow valve : 1419992198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1688901101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1680750089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 4.55 Tolerance mm : + 0.05

test only : + 0.10

Rack travel in mm : 1.00

Firing order : 1-3-4-2

Phasing : 0-90-180-270

Tolerance : + 0.50

Check

tolerance °NW : \leftarrow 0.75

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm : 11.00 Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 86.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance cm3/1000s. : + 3.0

Spreed Tolerance

cm3/1000 strokes : 4.5

Check tolerance		+
cm3/1000s.	: 7.0	+ Rated speed rpm : 1780
		🕂 guide sleeve
2nd speed rpm	: 300	† travel mm : 13.50
		+ Tolerance mm : +- 0.50
Rack travel in mr	m: 4.40	+
Tolerance mm	: 0.20	
Del. quantity		→ GUIDE SLEEVE POSITION
cm3/1000 strokes	: 12.0	
Tolerance		1
cm3/1000 strokes	: +- 2.0	+ control lever
Check tolerance		position degree : 111
cm3/1000s.	; - 4.5	Rated speed rpm : 1350
Spreed		The state of the s
Tolerance		Rack travel in mm: 10.00
cm3/1000 strokes	: 2.0	+ Tolerance mm : +- 2.00
Check tolerance		1000101100 11111
cm3/1000s.	: 4.0	
· · · · · · · · · · · · · · · · · · ·	• 1.0	FULL LOAD DELIVERY AT FULL LOAD STOP
		TOLE COAD DELIVERY AT TOLE COAD OTO
(B) SETTING OF IN	LIECTION PLIMP	Rated speed rpm : 1300
WITH GOVERNOR	AUCCITON I OUI	Aneroid pressure
MILLI GOVERNOR		+ hPa : 700
		Del. quantity
GUIDE SLEEVE TRAV	/51	cm3/1000 strokes : 86.0
GOIDE SEELVE TIVE	,,,,	Tolerance
Rated speed rpm	: 300	- cm3/1000 strokes : + 1.0
guide sleeve	. 500	Check tolerance
travel mm	: 0.91	+ cm3/1000s. : + 3.0
Tolerance mm	: +- 0.25	
rocerance min	رع.ن ،	+ Spreed + Tolerance
Doted aroad nam	: 1353	+ cm3/1000 strokes : 4.5
Rated speed rpm	: 1353	
guide sleeve	. 74/	+ Check tolerance
travel mm	7.14	+ cm3/1000s. : 7.0
Tolerance mm	: +- 0.25	†
Datad award man	. 4470	DATES COPES
Rated speed rpm	: 1130	+ RATED SPEED
guide sleeve	. 5.10	†
travel mm	: 5.40	T and the later of
Tolerance mm	: ← 0.25	+ control lever
Datad annad mm	. /10	+ position degree : 110.0
Rated speed rpm	: 610	tolerance degree : +- 4.0
guide sleeve	. 2.0/	10.00
travel mm	: 2.96	+ rack travel mm : 10.00
Tolerance mm	: +- 0.25	+ Rated speed rpm : 1345
5 1 - 1 - 1 - 1 1		+ Tolerance 1/min : + 5
Rated speed rpm	: 660	†
guide sleeve	2 24	+ rack travel mm : 4.00
travel mm	: 3.31	+ Rated speed rpm : 1435
Tolerance mm	: +- 0.25	† Tolerance 1/min : + 15
	700	†
Rated speed rpm	: 780	rack travel mm : 0.50
guide sleeve		+ Tolerance mm : + 0.50
travel mm	: 3.72	+ Rated speed rpm : 1550
Tolerance mm	: 0.25	†
	4.54	
Rated speed rpm	: 1679	+ LOW IDLE
guide sleeve	40.77	†
travel mm	: 12.00	†
Tolerance mm	: +- 0.25	+

control lever position degree tolerance degree		+ Aneroid pressure + hPa : 700 + Rated speed rpm : 750 - Del. quantity
Testing:		cm3/1000 strokes : 80.0 Tolerance
Rated speed rpm	: 300	- cm3/1000 strokes : + 1.5 - Check tolerance - cm3/1000s. : + 4.0
rack travel mm Tolerance mm	: 4.40 : ← 0.10	Spreed Tolerance
Rated speed rpm		- cm3/1000 strokes : 6.0 Check tolerance
CRT mm min.	: > 5.00	- cm3/1000s. : 9.0
TODOUE CONTROL		Aneroid pressure
TORQUE CONTROL		+ hPa : - + Rated speed rpm : 500
Rated speed rpm	: 1300	Del. quantity
rack travel mm	: 11.00	+ cm3/1000 strokes : 71.0
Tolerance mm	: + 0.05	+ Tolerance
San Araba and Ar	750	+ cm3/1000 strokes : + 1.0
Rated speed rpm	: 750	+ Check tolerance
Rated speed rpm rack travel mm Tolerance mm	: + 0.10	- cm3/1000s. : +- 3.0
		BREAKAWAY
ANEROID/ALTITUDE COMPENSATOR TEST		‡
		+ Rack travel in mm: 10.00
SETTING		Rated speed rpm : 1345 Tolerance 1/min : + 5
Rated speed rpm	: 500	Ţ
Pressure hPa	: 700	
rack travel mm		+ STARTING FUEL DELIVERY
Tolerance mm	: + 0.05	Rated speed rpm : 100
MEASUREMENT		+ Rated speed rpm : 100 + Del. quantity
· · · · · · · · · · · · · · · · · · ·		+ cm3/1000 strokes : 125.0
Pressure hPa	: -	+ Tolerance
Rated speed rpm		+ cm3/1000 strokes : + 5.0
Tolerance mm	: +- 0.10	+ Check tolerance + cm3/1000s. : +- 8.0
Rated speed rpm	: 500	T CIID/10003. : T 0.0
START CUT-OUT		
Rated speed rpm	: > 100	T LOW IDLE
Check	100	Rated speed rpm : 300
speed 1/min	: > 80	rack travel mm : 4.40
Rated speed rpm	: < 200	+ Tolerance mm : + 0.20
Check	4 200	+ Del. quantity
speed 1/min	: < 220	+ cm3/1000 strokes : 12.0 + Tolerance
FUEL DELIVERY CHAP	RACTERISTICS	- cm3/1000 strokes : + 2.0 Check tolerance
. The Presentiti dilui	7/10 / ENLEW 400	= cm3/1000s. : +- 4.5
		+ Spreed

Tolerance		
cm3/1000 strokes	:	2.0
Check tolerance		
cm3/1000s	•	4.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 20.03.95 : ISO 4113

Combination No.

: 0403246047

Injection pump

Pump designation : PES6MW100/720RS1522

EP type number

: 0413206023

Governor

: RQV300...1300MW148 Governer design.

: -4

Governer no.

: 0420083325

Cust. part No. : 0250744802

Customer-spec. information : MB-NFZ Customer

Motor

: 0M366LA

Power KW

: 155.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C

40

Tolerance °C

2.0

Overflow valve

: 1419992198

Inlet press. bar :

1.5

Test nozzle holde

assembly

: 1688901101

Opening pressure

208.5

Toleranta bar

1.5

Test lines

: 1680750089

Outside diameter :

8.0

x inside diameter : 3.0 600 x length mm

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0

Tolerance bar : + 1.0

Prestroke mm 4.55

Tolerance mm : + 0.05

test only : + 0.10

Rack travel in mm: -1.00

: 1-5-3-6-2-Firing order

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

: + 0.75tolerance °NW

BASIC SETTING

Rated speed rpm 1300

Rack travel in mm: 13.30

: + 0.05Tolerance mm

Del. quantity

cm3/1000 strokes : 118.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s.

3.0

Spreed

Tolerance -	l guido al anya
cm3/1000 strokes : 4.5	- guide sleeve - travel mm : 13.50
CHD/1000 3tf 0.65 . 4.5	- Tolerance mm : + 0.50
Check tolerance	
cm3/1000s. : 7.0	
	- GUIDE SLEEVE POSITION
2nd speed rpm : 300	-
	Rated speed rpm : 1500
Rack travel in mm: 4.20	- 1333
Tolerance mm : + 0.20	- Rack travel in mm : 10.00
Del. quantity	- Tolerance mm : + 2.50
cm3/1000 strokes : 12.0	
Tolerance	
cm3/1000 strokes : + 2.0	- FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance	-
cm3/1000s. : +- 4.5	- Rated speed rpm : 1300
Spreed	- Aneroid pressure
Tolerance	- hPa : 1200
cm3/1000 strokes : 2.0	Del. quantity
Check tolerance	- cm3/1000 strokes : 118.0
cm3/1000s. : 4.0	- Tolerance
†	- cm3/1000 strokes : + 1.0
(B) SETTING OF INJECTION PUMP	- Check tolerance - cm3/1000s. : +- 3.0
WITH GOVERNOR	- Spreed
ATIH GOAEWAOK	- Spreed - Tolerance
	- cm3/1000 strokes : 4.5
GUIDE SLEEVE TRAVEL	- Check tolerance
GOIDE OFFILE WASTE	- cm3/1000s. : 7.0
Rated speed rpm : 300	
guide sleeve	
travel mm : 0.92	- RATED SPEED
Tolerance mm : \leftarrow 0.25	•
+	
Rated speed rpm : 1355	control lever
guide sleeve	position degree : 120.0
travel mm : 9.32	tolerance degree : +- 4.0
Tolerance mm : + 0.25 +	•
<u> </u>	rack travel mm : 12.30
Rated speed rpm : 1078	Rated speed rpm : 1345
guide sleeve	Tolerance 1/min : +- 5
travel mm : 7.06	
Tolerance mm : + 0.25	rack travel mm : 4.00
Dated award was a 54/	Rated speed rpm : 1485
Rated speed rpm : 514	Tolerance 1/min : + 15
guide sleeve + travel mm : 2.14 +	nock though mm . 0.50
Tolerance mm : + 0.25	rack travel mm : 0.50 Tolerance mm : +- 0.50
Toterance in 1 1 0.25	Rated speed rpm : 1600
Rated speed rpm : 564	nated speed (pill . 1000
guide sleeve	
travel mm : 2.60	LOW IDLE
Tolerance mm : + 0.25	use VII als IV las las
Rated speed rpm : 740	control lever
guide sleeve	position degree : 74.0
travel mm : 3.93	tolerance degree : +- 4.0
Tolerance mm : +- 0.25 +	-
+	Testing:
Rated speed rpm : 1720 +	
•	

Rated speed rpm	_ FE IV P	
rack travel mm	: 4.20	+ Aneroid pressure + hPa : 1200
Tolerance mm	: +- 0.10	+ Rated speed rpm : 750 + Del. quantity
Rated speed rpm	: 200	+ cm3/1000 strokes : 114.0
CRT mm min.	: > 5.00	+ Tolerance + cm3/1000 strokes : +- 1.5 + Check tolerance
TORQUE CONTROL	· · · · · · · · · · · · · · · · · · ·	
Rated speed rpm	: 1300	Tolerance + cm3/1000 strokes : 6.0
rack travel mm Tolerance mm	: 13.30	+ Check tolerance + cm3/1000s. : 9.0
		+
Rated speed rpm rack travel mm	: 13.30	+ Aneroid pressure + hPa : -
Tolerance mm	: ← 0.10	Rated speed rpm : 500 Del. quantity
ANEROID/ALTITUDE COMPENSATOR TEST		+ Tolerance + cm3/1000 strokes : +- 1.0
		+ Check tolerance
SETTING		+ cm3/1000s. : +- 3.0
Rated speed rpm	: 500	BREAKAWAY
Pressure hPa	: 1200	+
rack travel mm Tolerance mm	: 13.30 : + 0.10	+ Rack travel in mm : 12.30
Toterance inii	0.10	Rated speed rpm : 1345
MEASUREMENT		† Tolerance 1/min : + 5
Pressure hPa	: -	+
Rated speed rpm Tolerance mm		STARTING FUEL DELIVERY
Rated speed rpm		Rated speed rpm : 100
raced speed i bill	. 500	+ Del. quantity
Pressure hPa rack travel mm	: 800 : 4.40	t cm3/1000 strokes : 150.0 Tolerance
Tolerance mm	: +- 0.10	+ cm3/1000 strokes : +- 5.0
Processo he-	: 300	Check tolerance
Pressure hPa rack travel mm	: 300	cm3/1000s. : +- 8.0
Tolerance mm	: + 0.10	1
START CUT-OUT		LOW IDLE
Rated speed rpm	: > 100	+ Rated speed rpm : 300
Check		rack travel mm : 4.20
speed 1/min	:> 80	† Tolerance mm : + 0.20
Rated speed rpm Check	: < 200	t Del. quantity cm3/1000 strokes : 12.0
speed 1/min	: < 220	† Tolerance
FUEL DELIVERY CHAP	RACTERISTICS	+ cm3/1000s. : + 4.5
		+ Spreed

Tolerance cm3/1000 strokes : Check tolerance cm3/1000s. : 2.0

4.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 20.03.95 Test oil : ISO 4113

Combination No. : 0403444112

Injection pump

Pump designation : PES4MW100/72GRS1127

EP type number : 0413404103

Governor

Governer design. : RQV300...1300MW48-2

Governer no. : 0420083110

Cust. part No. :

Customer—spec. information
Customer : MB-NFZ
Motor : OM 364 A
Power KW : 85.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 1417413047

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1688901101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1680750089

Outside diameter : 8.0

x inside diameter: 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : +- 1.0

Prestroke mm : 3.75
Tolerance mm : + 0.05

test only : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-3-4-2

Phasing : 0-90-180-270

Tolerance : \leftarrow 0.50

Check

tolerance °NW : + 0.75

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm : 11.15
Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 81.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +- 3.0

Spreed

Tolerance

cm3/1000 strokes : 3.5

. 5.5

Check tolerance +	•
cm3/1000s. : 6.0	rack travel mm : 10.10
+	- Rated speed rpm : 1345
2nd speed rpm : 300	Tolerance 1/min : + 5
+	
Rack travel in mm: 7.85	rack travel mm : 4.00
Tolerance mm : + 0.20	Rated speed rpm : 1445
Del. quantity	Tolerance 1/min : + 15
cm3/1000 strokes : 11.0	•
Tolerance +	rack travel mm : 0.50
cm $3/1000$ strokes : $+$ 2.0	Tolerance mm : + 0.50
Check tolerance	Rated speed rpm : 1550
cm3/1000s. : + 4.5	
Spreed	
Tolerance +	LOW IDLE
cm3/1000 strokes : 3.5	•
Check tolerance	
cm3/1000s. : 5.5	control lever
+	position degree : 86.0
+	tolerance degree : + 4.0
(B) SETTING OF INJECTION PUMP	
WITH GOVERNOR +	Testing:
+	
+	Rated speed rpm : 300
	rack travel mm : 7.85
GUIDE SLEEVE POSITION +	Tolerance mm : + 0.05
+	
<u> </u>	Rated speed rpm : 100
control lever	
position degree : -1 +	CRT mm min. :> 9.50
Rated speed rpm : 1330	
†	
Rack travel in mm: 16.50	CONTINUOUS-ACTION CONTROL
Tolerance mm : + 1.30 +	2010
†	Rated speed rpm : 465
FULL LOAD DELIVERY AT FULL LOAD STOP	
FOLL COAD DECIVERY AT FOLL COAD STOP	TORQUE CONTROL
Rated speed rpm : 1300	TORGOE CONTROL
Aneroid pressure	Rated speed rpm : 1300
hPa : -	rack travel mm : 13.15
Del. quantity	Tolerance mm : + 0.05
cm3/1000 strokes : 81.0	Totel difice limit . The Study
Tolerance	Rated speed rpm : 750
cm3/1000 strokes : + 1.0 +	rack travel mm : 11.95
Check tolerance	Tolerance mm : +- 0.10
cm3/1000s. : + 3.0	iocei diice imi
Spreed	Rated speed rpm : 585
Tolerance	rack travel mm : 12.20
cm3/1000 strokes : 3.5	Tolerance mm : +- 0.10
Check tolerance	
cm3/1000s. : 6.0	Rated speed rpm : 1000
1	rack travel mm : 11.20
	Tolerance mm : + 0.10
RATED SPEED	
1	
+	
control lever	START CUT-OUT
position degree : 120.0	
tolerance degree : + 4.0 +	Rated speed rpm :> 100

Check	
speed 1/min Rated speed rpm	: > 80 : < 230
Check	. < 250
speed 1/min	: < 250
FUEL DELIVERY CHA	ARACTERISTICS
Aneroid pressure	
hPa	: - : 750
Rated speed rpm Del. quantity	: 750
cm3/1000 strokes	: 77.0
Tolerance cm3/1000 strokes	: +- 1.5
Check tolerance	• • • • • • • • • • • • • • • • • • • •
cm3/1000s.	: +- 4.0
Spreed Tolerance	
cm3/1000 strokes	: 5.0
Check tolerance cm3/1000s.	: 7.0
	• •••
Aneroid pressure hPa	
Rated speed rpm	585
Del. quantity	
cm3/1000 strokes Tolerance	: 72.0
cm3/1000 strokes	: + 1.5
Check tolerance cm3/1000s.	: ← 4.0
CIID/ 10005.	· · · · · · · · · · · · · · · · · · ·
BREAKAWAY	
Dook doored do no	3: 10.10
Rack travel in mm Rated speed rpm	: 1345
Tolerance 1/min	
STARTING FUEL DEL	IVERY
Rated speed rpm	: 100
Del. quantity	. 07.0
cm3/1000 strokes Tolerance	: 83.0
cm3/1000 strokes	: + 5.0
Check tolerance cm3/1000s.	: +- 8.0
LOW IDLE	
Rated speed rpm	: 300
p-es ipili	-

rack travel mm	:	7.85
Tolerance mm	: +-	0.20
bel. quantity		44.0
cm3/1000 strokes	:	11.0
Tolerance		
cm3/1000 strokes	: +-	2.0
Check tolerance		
cm3/1000s.	: +-	4.5
Spreed		
Tolerance		
cm3/1000 strokes	:	3.5
Check tolerance		
cm3/1000s.	;	5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 21.03.95 Test oil : ISO 4113

Combination No. : 0403474022

Injection pump

Pump designation : PES4MW100/720RS1151

EP type number : 0413404104

Governor

Governer design. : RSV350...1300MW0A329

: -12

Governer no. : 0420085189

Cust. part No.

Customer—spec. information Customer : MB-NFZ

Motor : 0M364A Power KW : 79.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1419992198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1688901101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1680750089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

Test hydr. locking device for starting with 500...1000 hPa air pressure.

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant. per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0
Tolerance bar : + 1.0

Prestroke mm : 3.75
Tolerance mm : + 0.05

test only : \leftarrow 0.10

Rack travel in mm : 10.50
Tolerance mm : +- 1.50

Firing order : 1-3-4-2

Phasing : 0-90-180-270
Tolerance : + 0.50

Check

tolerance "NW : \leftarrow 0.75

BASIC SETTING

Rated speed rpm : 1280

Rack travel in mm : 10.95 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 81.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : +- 3.0

	l of the
Canad	Check tolerance
Spreed - Tolerance -	cm3/1000s. : 6.0
cm3/1000 strokes : 3.5	
CHO TODO SELOROS . S.S.	RATED SPEED
Check tolerance	NATED OF LED
cm3/1000s. : 6.0	
-	control lever
2nd speed rpm : 350	position degree : 99.0
	tolerance degree : +- 4.0
Rack travel in mm: > 6.40	
Tolerance mm : + 0.40	rack travel mm : 1.00
Del. quantity	Tolerance mm : + 0.70
cm3/1000 strokes : 12.0 - Tolerance -	Rated speed rpm : 1550
cm3/1000 strokes : +- 2.0	
Check tolerance	LOW IDLE
cm3/1000s. : +- 4.5	LOW IDEE
Spreed	Testing:
Tolerance -	-
cm3/1000 strokes : 3.5	Rated speed rpm : 350
Check tolerance -	rack travel mm : 6.40
cm3/1000s. : 5.5 -	Tolerance mm : + 0.40
(D) OFFICE OF THEOTICAL DUMP	rack travel mm : 2.00
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	F Rated speed rpm : 190
WITH GOVERNOR	Rated speed rpm : 19
	CRT mm min. :> 19.00
GUIDE SLEEVE POSITION	
-	- TORQUE CONTROL
+	
control lever	- Rated speed rpm : 1280
position degree : -3	rack travel mm : 10.95
Rated speed rpm : 800	Tolerance mm : + 0.05
Book topical do more a 0.65	- Dahad anad mm - 400
Rack travel in mm: 0.65 Tolerance mm: + 0.35	- Rated speed rpm : 600
Tolerance mm : + 0.35	made thought and a 11 05
	rack travel mm : 11.85
dovernor spring	rack travel mm : 11.85 Tolerance mm : + 0.10
governor spring pre-tension	Tolerance mm : +- 0.10
pre-tension +	Tolerance mm : +- 0.10 Rated speed rpm : 1000
	Tolerance mm : +- 0.10
pre-tension click setting x : 6.00	Tolerance mm : + 0.10 Rated speed rpm : 1000 rack travel mm : 11.80 Tolerance mm : + 0.10
pre-tension +	Tolerance mm : + 0.10 Rated speed rpm : 1000 rack travel mm : 11.80 Tolerance mm : + 0.10 Rated speed rpm : 1175
pre-tension click setting x : 6.00 FULL LOAD DELIVERY AT FULL LOAD STOP	Tolerance mm : + 0.10 Rated speed rpm : 1000 rack travel mm : 11.80 Tolerance mm : + 0.10 Rated speed rpm : 1175 rack travel mm : 11.15
pre-tension click setting x : 6.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1280	Tolerance mm : + 0.10 Rated speed rpm : 1000 rack travel mm : 11.80 Tolerance mm : + 0.10 Rated speed rpm : 1175
pre-tension click setting x : 6.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1280 Aneroid pressure	Tolerance mm : + 0.10 Rated speed rpm : 1000 rack travel mm : 11.80 Tolerance mm : + 0.10 Rated speed rpm : 1175 rack travel mm : 11.15
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1280 Aneroid pressure hPa : 700	Tolerance mm : + 0.10 Rated speed rpm : 1000 rack travel mm : 11.80 Tolerance mm : + 0.10 Rated speed rpm : 1175 rack travel mm : 11.15 Tolerance mm : + 0.15
pre-tension click setting x : 6.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1280 Aneroid pressure hPa : 700 Del. quantity	Tolerance mm : + 0.10 Rated speed rpm : 1000 rack travel mm : 11.80 Tolerance mm : + 0.10 Rated speed rpm : 1175 rack travel mm : 11.15 Tolerance mm : + 0.15 ANEROID/ALTITUDE
pre-tension click setting x : 6.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1280 Aneroid pressure hPa : 700 Del. quantity cm3/1000 strokes : 81.0	Tolerance mm : + 0.10 Rated speed rpm : 1000 rack travel mm : 11.80 Tolerance mm : + 0.10 Rated speed rpm : 1175 rack travel mm : 11.15 Tolerance mm : + 0.15
pre-tension click setting x : 6.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1280 Aneroid pressure hPa : 700 Del. quantity	Tolerance mm : + 0.10 Rated speed rpm : 1000 rack travel mm : 11.80 Tolerance mm : + 0.10 Rated speed rpm : 1175 rack travel mm : 11.15 Tolerance mm : + 0.15 ANEROID/ALTITUDE
pre-tension click setting x : 6.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1280 Aneroid pressure hPa : 700 Del. quantity cm3/1000 strokes : 81.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance	Tolerance mm : + 0.10 Rated speed rpm : 1000 rack travel mm : 11.80 Tolerance mm : + 0.10 Rated speed rpm : 1175 rack travel mm : 11.15 Tolerance mm : + 0.15 ANEROID/ALTITUDE
pre-tension click setting x : 6.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1280 Aneroid pressure hPa : 700 Del. quantity cm3/1000 strokes : 81.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0	Tolerance mm : + 0.10 Rated speed rpm : 1000 rack travel mm : 11.80 Tolerance mm : + 0.10 Rated speed rpm : 1175 rack travel mm : 11.15 Tolerance mm : + 0.15 ANEROID/ALTITUDE COMPENSATOR TEST
pre-tension click setting x : 6.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1280 Aneroid pressure hPa : 700 Del. quantity cm3/1000 strokes : 81.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0 Spreed	Tolerance mm : + 0.10 Rated speed rpm : 1000 rack travel mm : 11.80 Tolerance mm : + 0.10 Rated speed rpm : 1175 rack travel mm : 11.15 Tolerance mm : + 0.15 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 500
pre-tension click setting x : 6.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1280 Aneroid pressure hPa : 700 Del. quantity cm3/1000 strokes : 81.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance	Tolerance mm : + 0.10 Rated speed rpm : 1000 rack travel mm : 11.80 Tolerance mm : + 0.10 Rated speed rpm : 1175 rack travel mm : 11.15 Tolerance mm : + 0.15 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 500 Pressure hPa : 700
pre-tension click setting x : 6.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1280 Aneroid pressure hPa : 700 Del. quantity cm3/1000 strokes : 81.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0 Spreed	Tolerance mm : + 0.10 Rated speed rpm : 1000 rack travel mm : 11.80 Tolerance mm : + 0.10 Rated speed rpm : 1175 rack travel mm : 11.15 Tolerance mm : + 0.15 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 500

MEASUREMENT

Pressure hPa 500 Rated speed rpm 9.90 rack travel mm Tolerance mm 0.10 500 Rated speed rpm Pressure hPa 300 11.30 rack travel mm Tolerance mm : + 0.15200 Pressure hPa rack travel mm 10.80 Tolerance mm : +- 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure 700 Rated speed rpm 600 Del. quantity cm3/1000 strokes : 77.0 Tolerance cm3/1000 strokes 1.5 Check tolerance cm3/1000s. 4.0 Spreed Tolerance cm3/1000 strokes 5.0 Check tolerance 7.0 cm3/1000s. Aneroid pressure hPa 500 Rated speed rpm Del. quantity cm3/1000 strokes 46.0 Tolerance cm3/1000 strokes 1.0 Check tolerance

STARTING FUEL DELIVERY

cm3/1000s.

Rated speed rpm : 100
Del. quantity
cm3/1000 strokes : 83.0
Tolerance
cm3/1000 strokes : + 5.0
Check tolerance
cm3/1000s. : + 8.0

: +-

3.0

LOW IDLE

Rated speed (Sm	:	350
rack travel mm	: >	6.40
Tolerance mm	: +-	0.40
Del. quantity		
cm3/1000 strokes	•	12.0
Tolerance		
cm3/1000 strokes	: +-	2.0
Check tolerance		
cm3/1000\$.	: +-	4.5
Spreed		
Tolerance		
cm3/1000 strokes	:	3.5
Check tolerance		
cm3/1000s.	:	5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 09.03.95 Edition Test oil : ISO 4113

Combination No. : 0400866159

Injection pump

Pump designation : PES6A85D410/3RS2761

EP type number : 0410886895

Governor

Governer design. : RSV325...1400A2C2245

: 0420232537 Governer no.

Cust. part No. :

Customer—spec. information

: KHD Customer

: BF6L913T Motor

Power KW 85.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C

Tolerance *C 2.0

Overflow valve : 1419992198

Inlet press. bar : 1.5

Test nozzle holde

: 0681343009 assembly

Opening pressure

173.5 Tolerance bar

Test lines : 1680750014

Outside diameter : 6.0 x inside diameter : 2.0 600 x length mm

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 26.0 Tolerance bar : +- 1.0

Prestroke mm 2.55 : +- 0.05 Tolerance mm

test only : + 0.10

Rack travel in mm: 19.50 Tolerance mm : +- 1.50

: 1-5-3-6-2-Firing order

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance °NW : + 0.75

BASIC SETTING

Rated speed rpm :

1200

Rack travel in mm: 10.45 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 70.0

Tolerance

cm3/1000 strokes : + 0.5

Check tolerance

: +cm3/1000s. 2.5

Spreed

Tolerance	1
cm3/1000 strokes : 3.0	I
	+ RATED SPEED
Check tolerance	†
cm3/1000s. : 7.0	t control lever
2nd speed rpm : 325	position degree : 99.0
crid opeca i pir	tolerance degree : + 4.0
Rack travel in mm : 8.00	+
Tolerance mm : +- 0.10	rack travel mm : 9.45
Del. quantity cm3/1000 strokes : 16.0	Rated speed rpm : 1245 Tolerance 1/min : +- 5
Tolerance	Total and military
cm3/1000 strokes : + 3.0	+ rack travel mm : 4.00
Check tolerance	Rated speed rpm : 1280
cm3/1000S. : +- 5.0 Spreed	Tolerance 1/min : + 15
Tolerance	rack travel mm : 0.85
cm3/1000 strokes : 4.5	+ Tolerance mm : + 0.55
Check tolerance	+ Rated speed rpm : 1445
cm3/1000s. : 7.5	+ rack travel mm : 4.00
	+ rack travel mm : 4.00 + Rated speed rpm : 1315
(B) SETTING OF INJECTION PUMP	+
WITH GOVERNOR	
	+ LOW IDLE
	I
GUIDE SLEEVE POSITION	+ control lever
	+ position degree : 68.0
control lever	tolerance degree : +- 4.0
position degree : - 3	+ Setting point w/out bumper spring
Rated speed rpm : 800	+
	+ Rated speed rpm : 325
Rack travel in mm : 0.50 Tolerance mm : + 0.20	rack travel mm : 7.50
Tolerance mm : + 0.20	Testing:
governor spring	+
pre-tension	Rated speed rpm : 325
click setting x : 3.30	rack travel mm : 8.00
	Tolerance mm : +- 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP	+ rack travel mm : 2.00
	+ Rated speed rpm : 490_
Rated speed rpm : 1200	Tolerance 1/min : + 30
Aneroid pressure hPa : -	Rated speed rpm : 100
Del. quantity	+ Nated Speed (pill : 100
cm3/1000 strokes : 70.0	+ CRT mm min. : > 19.50
Tolerance	†
cm3/1000 strokes : +- 0.5 Check tolerance	TORQUE CONTROL
cm3/1000s. : +- 2.5	TONGOL CONTINOL
Spreed	Rated speed rpm : 1200
Tolerance	rack travel mm : 10.45
cm3/1000 strokes : 3.0 Check tolerance	Tolerance mm : + 0.05
cm3/1000s. : 7.0	T Rated speed rpm : 500
	rack travel mm : 11.00

Tolerance mm	: ← 0.05
Rated speed rpm rack travel mm Tolerance mm	: 800 : 11.00 : + 0.10
Rated speed rpm rack travel mm Tolerance mm	: 975 : 10.80 : + 0.10
FUEL DELIVERY CHA	PACTERISTICS
	INACTERISTICS
Aneroid pressure hPa	: -
Rated speed rpm Del. quantity	: 500
cm3/1000 strokes	: 58.0
Tolerance cm3/1000 strokes	: +- 1.5
Check tolerance cm3/1000s.	: ← 3.5
Aneroid pressure	
hPa Rated speed rpm	800
Del. quantity cm3/1000 strokes	: 65.0
Tolerance	
cm3/1000 strokes Check tolerance	: +- 1.5
cm3/1000s.	: +- 3.5
BREAKAWAY	
Rack travel in mm	: 9.45
Rated speed rpm Tolerance 1/min	: 1245 : +- 5
rocerance minn	. +-)
STARTING FUEL DEL	IVERY
Rated speed rpm	: 100
rack travel mm Tolerance mm	: 15.20 : + 0.20
Del. quantity cm3/1000 strokes	: 95.0
Tolerance	
cm3/1000 strokes Check tolerance	: +- 7.5
cm3/1000s.	: ← 10.0

LOW IDLE

Rated speed rpm	:		325
rack travel mm	:		8.00
Tolerance mm	:	+-	0.10
Del. quantity			
cm3/1000 strokes	:		16.0
Tolerance			
cm3/1000 strokes	:	+-	3.0
Check tolerance			
cm3/1000s.	:	+-	5.0
Spreed			
Tolerance			
cm3/1000 strokes	:		4.5
Check tolerance			
cm3/1000s.	:		7.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 13.03.95 Test oil : ISO 4113

Combination No. : 0401848828

Injection pump

Pump designation : PE8P120A520/4LS3850

EP type number : 0411828723

Governor

Governer design. : RQ300/900PA1230

Governer no. : 0421801792

Cust. part No. :

Customer-spec. information Customer : DAEWOO : D2848LE Motor

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C 40 Tolerance °C : +- 2.0

Overflow valve : 1417413025

Inlet press. bar : 1.5 Tolerance bar : +- 0.1

Test nozzle holde

: 1688901105 assembly

Opening pressure

208.5 : +- 1.5 Tolerance bar

Lube oil : 1409918004

Test lines : 1680750089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.05 Tolerance mm : + 0.05

test only : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 8-7-2-6-3 :-5-4-1

Phasing : 0-45-90-135-180

: -225-270-315

Tolerance : + 0.30

Check

tolerance °NW : +- 0.50

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 8

BASIC SETTING

Rated speed rpm : 850

Rack travel in mm: 11.90 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 208.0

G12

Tolerance + cm3/1000 strokes : + 1.0	Rated speed rpm : 1050
Check tolerance cm3/1000s. : + 4.0	guide sleeve travel mm : 11.50 Tolerance mm : +- 0.50
Spreed Tolerance cm3/1000 strokes : 6.0	GUIDE SLEEVE POSITION
Check tolerance	Rated speed rpm : 600
cm3/1000s. : 10.0	Rack travel in mm : 20.00 Tolerance mm : + 0.80
2nd speed rpm : 300	
Rack travel in mm: 6.80 Tolerance mm: + 0.30	FULL LOAD DELIVERY AT FULL LOAD STOP
Del. quantity cm3/1000 strokes : 24.0 + Tolerance +	Rated speed rpm : 850 Aneroid pressure hPa : -
cm3/1000 strokes : + 3.0 +	Del. quantity
Check tolerance + 6.0 +	cm3/1000 strokes : 208.0 Tolerance
Spreed +	cm3/1000 strokes : +- 1.0 Check tolerance
cm3/1000 strokes : 6.0 + Check tolerance	cm3/1000s. : +- 4.0 Spreed
cm3/1000s. : 10.0	Tolerance cm3/1000 strokes : 6.0
Ţ.	Check tolerance
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	cm3/1000s. : 10.0
GUIDE SLEEVE TRAVEL	RATED SPEED
Rated speed rpm : 300	
	control lever
guide sleeve travel mm : 1.44	control lever position degree : 31.0 tolerance degree : + 4.0
guide sleeve	position degree : 31.0 tolerance degree : + 4.0
guide sleeve travel mm : 1.44 Tolerance mm : + 0.10 Rated speed rpm : 932	position degree : 31.0 tolerance degree : + 4.0 control lever position degree : 93.0
guide sleeve travel mm : 1.44 Tolerance mm : + 0.10 Rated speed rpm : 932 guide sleeve travel mm : 6.37	position degree : 31.0 tolerance degree : + 4.0 control lever position degree : 93.0 tolerance degree : + 4.0
guide sleeve travel mm : 1.44 Tolerance mm : + 0.10 Rated speed rpm : 932 guide sleeve	position degree : 31.0 tolerance degree : + 4.0 control lever position degree : 93.0 tolerance degree : + 4.0 rack travel mm : 10.90
guide sleeve travel mm : 1.44 Tolerance mm : + 0.10 Rated speed rpm : 932 guide sleeve travel mm : 6.37	position degree : 31.0 tolerance degree : + 4.0 control lever position degree : 93.0 tolerance degree : + 4.0
guide sleeve travel mm : 1.44 Tolerance mm : + 0.10 Rated speed rpm : 932 guide sleeve travel mm : 6.37 Tolerance mm : + 0.10 Rated speed rpm : 880 guide sleeve travel mm : 6.00	position degree : 31.0 tolerance degree : + 4.0 control lever position degree : 93.0 tolerance degree : + 4.0 rack travel mm : 10.90 Rated speed rpm : 925 Tolerance 1/min : + 5 rack travel mm : 4.00
guide sleeve travel mm : 1.44 Tolerance mm : + 0.10 Rated speed rpm : 932 guide sleeve travel mm : 6.37 Tolerance mm : + 0.10 Rated speed rpm : 880 guide sleeve travel mm : 6.00 Tolerance mm : + 0.10	position degree : 31.0 tolerance degree : + 4.0 control lever position degree : 93.0 tolerance degree : + 4.0 rack travel mm : 10.90 Rated speed rpm : 925 Tolerance 1/min : + 5
guide sleeve travel mm : 1.44 Tolerance mm : + 0.10 Rated speed rpm : 932 guide sleeve travel mm : 6.37 Tolerance mm : + 0.10 Rated speed rpm : 880 guide sleeve travel mm : 6.00 Tolerance mm : + 0.10 Rated speed rpm : 433	position degree : 31.0 tolerance degree : + 4.0 control lever position degree : 93.0 tolerance degree : + 4.0 rack travel mm : 10.90 Rated speed rpm : 925 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 965 Tolerance 1/min : + 15
guide sleeve travel mm : 1.44 Tolerance mm : + 0.10 Rated speed rpm : 932 guide sleeve travel mm : 6.37 Tolerance mm : + 0.10 Rated speed rpm : 880 guide sleeve travel mm : 6.00 Tolerance mm : + 0.10 Rated speed rpm : 433 guide sleeve travel mm : 4.94	position degree : 31.0 tolerance degree : + 4.0 control lever position degree : 93.0 tolerance degree : + 4.0 rack travel mm : 10.90 Rated speed rpm : 925 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 965 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : 0.50 Tolerance mm : + 0.50
guide sleeve travel mm : 1.44 Tolerance mm : + 0.10 Rated speed rpm : 932 guide sleeve travel mm : 6.37 Tolerance mm : + 0.10 Rated speed rpm : 880 guide sleeve travel mm : 6.00 Tolerance mm : + 0.10 Rated speed rpm : 433 guide sleeve travel mm : 4.94 Tolerance mm : + 0.10	position degree : 31.0 tolerance degree : + 4.0 control lever position degree : 93.0 tolerance degree : + 4.0 rack travel mm : 10.90 Rated speed rpm : 925 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 965 Tolerance 1/min : + 15 rack travel mm : 0.50
guide sleeve travel mm : 1.44 Tolerance mm : + 0.10 Rated speed rpm : 932 guide sleeve travel mm : 6.37 Tolerance mm : + 0.10 Rated speed rpm : 880 guide sleeve travel mm : 6.00 Tolerance mm : + 0.10 Rated speed rpm : 433 guide sleeve travel mm : 4.94	position degree : 31.0 tolerance degree : + 4.0 control lever position degree : 93.0 tolerance degree : + 4.0 rack travel mm : 10.90 Rated speed rpm : 925 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 965 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : 0.50 Tolerance mm : + 0.50
guide sleeve travel mm : 1.44 Tolerance mm : + 0.10 Rated speed rpm : 932 guide sleeve travel mm : 6.37 Tolerance mm : + 0.10 Rated speed rpm : 880 guide sleeve travel mm : 6.00 Tolerance mm : + 0.10 Rated speed rpm : 433 guide sleeve travel mm : 4.94 Tolerance mm : + 0.10 Rated speed rpm : 4.94 Tolerance mm : + 0.10	position degree : 31.0 tolerance degree : + 4.0 control lever position degree : 93.0 tolerance degree : + 4.0 rack travel mm : 10.90 Rated speed rpm : 925 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 965 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1100

control lever position degree tolerance degree	: 75.0 : +- 4.0
control lever position degree tolerance degree	: 13.0 : +- 4.0
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 300 : 7.40 : + 0.10
rack travel mm Rated speed rpm Tolerance 1/min	: 2.00 : 425 : ← 20
Rated speed rpm	: 200
CRT mm min.	: > 9.80
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	: 850 : 11.90 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 650 : 11.90 : + 0.05
START CUT-OUT	
Rated speed rpm Check	: > 100
speed 1/min Rated speed rpm	: > 80 : < 220
Check speed 1/min	: < 240
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure	•
Rated speed rpm	: 650
Del. quantity cm3/1000 strokes	: 212.0
Tolerance cm3/1000 strokes	: 3.0
Check tolerance cm3/1000s.	: +- 6.0
BREAKAWAY	

Rack travel in mm	:		10.90
Rated speed rpm	:		925
Tolerance 1/min	:	+	5

STARTING FUEL DELIVERY

Del. quantity cm3/1000 strokes	:	160.0
Tolerance cm3/1000 strokes	: +	- 20.0
Check tolerance cm3/1000s.	: +	- 24.0

LOW IDLE

Rated speed rpm rack travel mm Tolerance mm	: +-	300 6.80 0.30
Del. quantity cm3/1000 strokes Tolerance	:	24.0
cm3/1000 strokes Check tolerance	: +-	3.0
cm3/1000s.	: +-	6.0
Tolerance cm3/1000 strokes Check tolerance	•	6.0
cm3/1000s.	:	10.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 15.03.95 Edition Test oil : ISO 4113

Combination No. : 0401849757

Injection pump

Pump designation : PE10P120A520/4LS3863

EP type number : 0411897711

Governor

Governer design. : RQ300/900PA1230

Governer no. : 0421801792

Cust. part No. :

Customer-spec. information Customer : DAEWOO : D2840LE Motor

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C : + 2.0

Overflow valve : 1417413025

1.5 Inlet press. bar : Tolerance bar : +- 0.1

Test nozzle holde

: 1688901105 assembly

Opening pressure

208.5 Tolerance bar : +- 1.5

Lube oil : 1409918004

Test lines : 1680750089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.05 Tolerance mm : +- 0.05

test only : + 0.10

Rack travel in mm: 10.50 Tolerance mm : + 1.50

Firing order

: 10- 9- 4- 1- 8 : - 7- 6- 3- 5 : - 2

Phasing : 0-45-72-117-144

: -189-216-261-288

: -333

Tolerance : + 0.30

Check

tolerance °NW : **←** 0.50

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 10

BASIC SETTING

Rated speed rpm : 850

Rack travel in mm : 11.90

Tolerance mm : \leftarrow 0.05

Del. quantity	+ guide sleeve
cm3/1000 strokes : 208.0	travel mm : 6.00
CIIDA LOOD STLOKES . 200.0	
	+ Tolerance mm : + 0.10
Tolerance	+
cm3/1000 strokes : +- 1.0	Rated speed rpm : 1050
	guide sleeve
Charle del angue	T guide steeve
Check tolerance	+ travel mm : 11.50
cm3/1000s. : +- 4.0)
	_
Spreed	
Tolerance	CHINE CLEENE POCTITON
	+ GUIDE SLEEVE POSITION
cm3/1000 strokes : 6.0) †
	+ Rated speed rpm : 600
Check tolerance	
cm3/1000s. : 10.0	Rack travel in mm: 20.00
CIID7 10003 10.0	
	+ Tolerance mm : + 0.80
2nd speed rpm : 300	+
·	<u> </u>
Rack travel in mm: 6.80	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance mm : $+$ 0.30	
Del. quantity	+ Rated speed rpm : 850
cm3/1000 strokes : 24.0	
Tolerance	+ hPa : -
cm3/1000 strokes : + 3.0	(John Maranio Loy
Check tolerance	+ cm3/1000 strokes : 208.0
cm3/1000s. : +- 6.0	+ Tolerance
Spreed	+ cm3/1000 strokes : $+$ 1.0
Tolerance	+ Check tolerance
cm3/1000 strokes : 7.0	+ cm3/1000s. : + 4.0
Check tolerance	+ Spreed
cm3/1000s. : 11.0	
· · · · · · · · · · · · · · · · · · ·	(
	+ cm3/1000 strokes : 6.0
	There tolerance
	+ Check tolerance
(B) SETTING OF INJECTION PUM	
(B) SETTING OF INJECTION PUM WITH GOVERNOR	
	P cm3/1000s. : 10.0
WITH GOVERNOR	
	P cm3/1000s. : 10.0
WITH GOVERNOR	P cm3/1000s. : 10.0
WITH GOVERNOR GUIDE SLEEVE TRAVEL	P
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300	P cm3/1000s. : 10.0 RATED SPEED control lever
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve	control lever position degree : 31.0
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.44	cm3/1000s. : 10.0 RATED SPEED control lever position degree : 31.0 tolerance degree : +- 4.0
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.44	cm3/1000s. : 10.0 RATED SPEED control lever position degree : 31.0 tolerance degree : +- 4.0
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.44	cm3/1000s. : 10.0 RATED SPEED control lever position degree : 31.0 tolerance degree : +- 4.0
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.44 Tolerance mm : + 0.10	cm3/1000s. : 10.0 RATED SPEED control lever position degree : 31.0 tolerance degree : + 4.0 control lever
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.44 Tolerance mm : + 0.10 Rated speed rpm : 932	cm3/1000s. : 10.0 RATED SPEED control lever position degree : 31.0 tolerance degree : + 4.0 control lever position degree : 93.0
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.44 Tolerance mm : + 0.10 Rated speed rpm : 932 guide sleeve	cm3/1000s. : 10.0 RATED SPEED control lever position degree : 31.0 tolerance degree : + 4.0 control lever position degree : 93.0 tolerance degree : + 4.0
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.44 Tolerance mm : + 0.10 Rated speed rpm : 932 guide sleeve	cm3/1000s. : 10.0 RATED SPEED control lever position degree : 31.0 tolerance degree : + 4.0 control lever position degree : 93.0 tolerance degree : + 4.0
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.44 Tolerance mm : + 0.10 Rated speed rpm : 932 guide sleeve travel mm : 6.37	cm3/1000s. : 10.0 RATED SPEED control lever position degree : 31.0 tolerance degree : + 4.0 control lever position degree : 93.0 tolerance degree : + 4.0
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.44 Tolerance mm : + 0.10 Rated speed rpm : 932 guide sleeve	control lever position degree : 31.0 tolerance degree : + 4.0 control lever position degree : 93.0 tolerance degree : + 4.0 rack travel mm : 10.90
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.44 Tolerance mm : + 0.10 Rated speed rpm : 932 guide sleeve travel mm : 6.37 Tolerance mm : + 0.10	RATED SPEED control lever position degree : 31.0 tolerance degree : +- 4.0 control lever position degree : 93.0 tolerance degree : +- 4.0 rack travel mm : 10.90 Rated speed rpm : 925
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.44 Tolerance mm : + 0.10 Rated speed rpm : 932 guide sleeve travel mm : 6.37 Tolerance mm : + 0.10 Rated speed rpm : 880	control lever position degree : 31.0 tolerance degree : + 4.0 control lever position degree : 93.0 tolerance degree : + 4.0 rack travel mm : 10.90
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.44 Tolerance mm : + 0.10 Rated speed rpm : 932 guide sleeve travel mm : 6.37 Tolerance mm : + 0.10	RATED SPEED control lever position degree : 31.0 tolerance degree : +- 4.0 control lever position degree : 93.0 tolerance degree : +- 4.0 rack travel mm : 10.90 Rated speed rpm : 925
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.44 Tolerance mm : + 0.10 Rated speed rpm : 932 guide sleeve travel mm : 6.37 Tolerance mm : + 0.10 Rated speed rpm : 880 guide sleeve	control lever position degree : 31.0 tolerance degree : + 4.0 control lever position degree : 93.0 tolerance degree : + 4.0 rack travel mm : 10.90 Rated speed rpm : 925 Tolerance 1/min : + 5
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.44 Tolerance mm : + 0.10 Rated speed rpm : 932 guide sleeve travel mm : 6.37 Tolerance mm : + 0.10 Rated speed rpm : 880 guide sleeve travel mm : 6.00	RATED SPEED control lever position degree : 31.0 tolerance degree : + 4.0 control lever position degree : 93.0 tolerance degree : + 4.0 rack travel mm : 10.90 Rated speed rpm : 925 Tolerance 1/min : + 5 rack travel mm : 4.00
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.44 Tolerance mm : + 0.10 Rated speed rpm : 932 guide sleeve travel mm : 6.37 Tolerance mm : + 0.10 Rated speed rpm : 880 guide sleeve	RATED SPEED control lever position degree : 31.0 tolerance degree : + 4.0 control lever position degree : 93.0 tolerance degree : + 4.0 rack travel mm : 10.90 Rated speed rpm : 925 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 965
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.44 Tolerance mm : + 0.10 Rated speed rpm : 932 guide sleeve travel mm : 6.37 Tolerance mm : + 0.10 Rated speed rpm : 880 guide sleeve travel mm : 6.00 Tolerance mm : + 0.10	RATED SPEED control lever position degree : 31.0 tolerance degree : + 4.0 control lever position degree : 93.0 tolerance degree : + 4.0 rack travel mm : 10.90 Rated speed rpm : 925 Tolerance 1/min : + 5 rack travel mm : 4.00
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.44 Tolerance mm : + 0.10 Rated speed rpm : 932 guide sleeve travel mm : 6.37 Tolerance mm : + 0.10 Rated speed rpm : 880 guide sleeve travel mm : 6.00	RATED SPEED control lever position degree : 31.0 tolerance degree : + 4.0 control lever position degree : 93.0 tolerance degree : + 4.0 rack travel mm : 10.90 Rated speed rpm : 925 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 965 Tolerance 1/min : + 15
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.44 Tolerance mm : + 0.10 Rated speed rpm : 932 guide sleeve travel mm : 6.37 Tolerance mm : + 0.10 Rated speed rpm : 880 guide sleeve travel mm : 6.00 Tolerance mm : + 0.10 Rated speed rpm : 433	RATED SPEED control lever position degree : 31.0 tolerance degree : + 4.0 control lever position degree : 93.0 tolerance degree : + 4.0 rack travel mm : 10.90 Rated speed rpm : 925 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 965 Tolerance 1/min : + 15
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.44 Tolerance mm : + 0.10 Rated speed rpm : 932 guide sleeve travel mm : 6.37 Tolerance mm : + 0.10 Rated speed rpm : 880 guide sleeve travel mm : 6.00 Tolerance mm : + 0.10 Rated speed rpm : 433 guide sleeve	RATED SPEED control lever position degree : 31.0 tolerance degree : +- 4.0 control lever position degree : 93.0 tolerance degree : +- 4.0 rack travel mm : 10.90 Rated speed rpm : 925 Tolerance 1/min : +- 5 rack travel mm : 4.00 Rated speed rpm : 965 Tolerance 1/min : +- 15 rack travel mm : 0.50
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.44 Tolerance mm : + 0.10 Rated speed rpm : 932 guide sleeve travel mm : 6.37 Tolerance mm : + 0.10 Rated speed rpm : 880 guide sleeve travel mm : 6.00 Tolerance mm : + 0.10 Rated speed rpm : 433 guide sleeve travel mm : 433 guide sleeve travel mm : 4.94	RATED SPEED control lever position degree : 31.0 tolerance degree : +- 4.0 control lever position degree : 93.0 tolerance degree : +- 4.0 rack travel mm : 10.90 Rated speed rpm : 925 Tolerance 1/min : +- 5 rack travel mm : 4.00 Rated speed rpm : 965 Tolerance 1/min : +- 15 rack travel mm : 0.50 Tolerance mm : 0.50
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.44 Tolerance mm : + 0.10 Rated speed rpm : 932 guide sleeve travel mm : 6.37 Tolerance mm : + 0.10 Rated speed rpm : 880 guide sleeve travel mm : 6.00 Tolerance mm : + 0.10 Rated speed rpm : 433 guide sleeve	RATED SPEED control lever position degree : 31.0 tolerance degree : +- 4.0 control lever position degree : 93.0 tolerance degree : +- 4.0 rack travel mm : 10.90 Rated speed rpm : 925 Tolerance 1/min : +- 5 rack travel mm : 4.00 Rated speed rpm : 965 Tolerance 1/min : +- 15 rack travel mm : 0.50
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.44 Tolerance mm : + 0.10 Rated speed rpm : 932 guide sleeve travel mm : 6.37 Tolerance mm : + 0.10 Rated speed rpm : 880 guide sleeve travel mm : 6.00 Tolerance mm : + 0.10 Rated speed rpm : 433 guide sleeve travel mm : 4.94 Tolerance mm : + 0.10	RATED SPEED control lever position degree : 31.0 tolerance degree : +- 4.0 control lever position degree : 93.0 tolerance degree : +- 4.0 rack travel mm : 10.90 Rated speed rpm : 925 Tolerance 1/min : +- 5 rack travel mm : 4.00 Rated speed rpm : 965 Tolerance 1/min : +- 15 rack travel mm : 0.50 Tolerance mm : 0.50
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.44 Tolerance mm : + 0.10 Rated speed rpm : 932 guide sleeve travel mm : 6.37 Tolerance mm : + 0.10 Rated speed rpm : 880 guide sleeve travel mm : 6.00 Tolerance mm : + 0.10 Rated speed rpm : 433 guide sleeve travel mm : 433 guide sleeve travel mm : 4.94	RATED SPEED control lever position degree : 31.0 tolerance degree : +- 4.0 control lever position degree : 93.0 tolerance degree : +- 4.0 rack travel mm : 10.90 Rated speed rpm : 925 Tolerance 1/min : +- 5 rack travel mm : 4.00 Rated speed rpm : 965 Tolerance 1/min : +- 15 rack travel mm : 0.50 Tolerance mm : 0.50

LOW IDLE

control lever position degree : 75.0 tolerance degree : + 4.0

control lever

position degree : 13.0 tolerance degree : +- 4.0

Testing:

Rated speed rpm : 300 rack travel mm : 7.40 Tolerance mm : +- 0.10

rack travel mm : 2.00
Rated speed rpm : 425
Tolerance 1/min : + 20

Rated speed rpm : 200

CRT mm min. : > 9.80

TORQUE CONTROL

Rated speed rpm : 850 rack travel mm : 11.90 Tolerance mm : + 0.05

Rated speed rpm : 650 rack travel mm : 11.90 Tolerance mm : + 0.05

START CUT-OUT

Rated speed rpm : > 100
Check
speed 1/min : > 80
Rated speed rpm : < 220
Check
speed 1/min : < 240

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : Rated speed rpm : 650
Del. quantity
cm3/1000 strokes : 212.0

Tolerance

cm3/1000 strokes : + 3.0

Check tolerance

cm3/1000s. : +- 6.0

BREAKAWAY

Rack travel in mm : 10.90
Rated speed rpm : 925
Tolerance 1/min : + 5

STARTING FUEL DELIVERY

Del. quantity

cm3/1000 strokes : 160.0

Tolerance

cm3/1000 strokes : +- 20.0

Check tolerance

cm3/1000s. : +- 24.0

LOW IDLE

Rated speed rpm **500**c 6.80 rack travel mm Tolerance mm 0.30 Del. quantity cm3/1000 strokes : 24.0 Tolerance cm3/1000 strokes 3.0 : +-Check tolerance cm3/1000s. 6.0 : +-Spreed Tolerance cm3/1000 strokes : 7.0 Check tolerance cm3/1000s.11.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 09.03.95 : ISO 4113

Combination No. : 0402646603

Injection pump

Pump designation : PE6P120A720RS7022

EP type number : 0412626873

Governor

Governer design. : RQV200...1000PA539

: -15

Governer no.

: 0421814013

Cust. part No. : 1340658

Customer-spec. information Customer : SCANIA

: DS11 75 Motor

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 1417413025

2.5 Inlet press. bar : Tolerance bar

Tolerance l/h : + 10.0

Test nozzle holde

: 1688901104 assembly

Opening pressure

251.5 Tolerance bar : +- 1.5

Test lines : 1680750008

Outside diameter : 6.0

x inside diameter : 2.0

x length mm : 600

REMARKS

Start-of-delivery setting with ROBO

diaphraam.

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +- 1.0

Prestroke mm : 4.45 Tolerance mm : + 7.05

test only : + 0.10

Rack travel in mm: 10.50 Tolerance mm : + 1.50

: 1-5-3-6-2-Firing order

Phasing : 0-60-120-180-240

: -300

: **←** 0.30 Tolerance

Check

tolerance *NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm: 12.15

Tolerance mm : ← 0.05

Del. quantity + cm3/1000 strokes : 209.0 +	Spreed Tolerance
Tolerance	cm3/1000 strokes : 8.0 Check tolerance
cm3/1000 strokes : +- 1.0	cm3/1000s. : 12.0
Check tolerance cm3/1000s. : + 4.0	RATED SPEED
Spreed Tolerance cm3/1000 strokes : 8.0	control lever position degree : 64.0
Check tolerance	tolerance degree : + 4.0
+	control lever position degree : 116.0
2nd speed rpm : 250	tolerance degree : + 4.0
Rack travel in mm: 4.70 + Tolerance mm: + 0.30 + Del. quantity	rack travel mm : 11.10 Rated speed rpm : 1045 Tolerance 1/min : +- 5
cm3/1000 strokes : 17.0 + Tolerance +	rack travel mm : 4.00
cm3/1000 strokes : + 2.0 + Check tolerance +	Rated speed rpm : 1140 Tolerance 1/min : +- 15
cm3/1000s. : +- 5.0 + Spreed +	rack travel mm : 7.50
Tolerance + cm3/1000 strokes : 4.0 +	Tolerance mm : +- 0.50 Rated speed rpm : 1250
Check tolerance cm3/1000s. : 8.0	
	LOW IDLE
	control lever position degree : 67.0
cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR	control lever position degree : 67.0 tolerance degree : + 4.0
cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION	control lever position degree : 67.0
cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR	control lever position degree : 67.0 tolerance degree : +- 4.0 control lever position degree : 23.0 tolerance degree : +- 4.0 Testing:
Cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION control lever position degree : -1 Rated speed rpm : 1050 Rack travel in mm : 16.50	control lever position degree : 67.0 tolerance degree : + 4.0 control lever position degree : 23.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 250 rack travel mm : 4.70
Cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION control lever position degree : -1 Rated speed rpm : 1050	control lever position degree : 67.0 tolerance degree : + 4.0 control lever position degree : 23.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 250 rack travel mm : 4.70 Tolerance mm : + 0.10
Cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION control lever position degree : -1 Rated speed rpm : 1050 Rack travel in mm : 16.50	control lever position degree : 67.0 tolerance degree : + 4.0 control lever position degree : 23.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 250 rack travel mm : 4.70 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 2.00 Rated speed rpm : 400
Cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION control lever position degree : -1 Rated speed rpm : 1050 Rack travel in mm : 16.50 Tolerance mm : + 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700	control lever position degree : 67.0 tolerance degree : + 4.0 control lever position degree : 23.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 250 rack travel mm : 4.70 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 400 Tolerance 1/min : + 30
Cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION control lever position degree : -1 Rated speed rpm : 1050 Rack travel in mm : 16.50 Tolerance mm : + 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPa : 1500	control lever position degree : 67.0 tolerance degree : + 4.0 control lever position degree : 23.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 250 rack travel mm : 4.70 Tolerance mm : 4.70 Tolerance mm : 2.00 Rated speed rpm : 400 Tolerance 1/min : + 30 Rated speed rpm : 150
Cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION control lever position degree : -1 Rated speed rpm : 1050 Rack travel in mm : 16.50 Tolerance mm : +- 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 209.0	control lever position degree : 67.0 tolerance degree : + 4.0 control lever position degree : 23.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 250 rack travel mm : 4.70 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 400 Tolerance 1/min : + 30
Cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION control lever position degree : -1 Rated speed rpm : 1050 Rack travel in mm : 16.50 Tolerance mm : + 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPa : 1500 Del. quantity	control lever position degree : 67.0 tolerance degree : + 4.0 control lever position degree : 23.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 250 rack travel mm : 4.70 Tolerance mm : 4.70 Tolerance mm : 2.00 Rated speed rpm : 400 Tolerance 1/min : + 30 Rated speed rpm : 150

12.15 rack travel mm Tolerance mm : +- 0.05 Rated speed rpm 1000 12.15 rack travel mm Tolerance mm : +- 0.05 ANEROID/ALTITUDE COMPENSATOR TEST **MEASUREMENT** Pressure hPa 390 rack travel mm 10.60 Tolerance mm : +- 0.15 Pressure hPa 590 rack travel mm 11.65 Tolerance mm : +- 0.05 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa 1500 Rated speed rpm 1000 Del. quantity cm3/1000 strokes : 198.0 Tolerance cm3/1000 strokes : +-4.0 Check tolerance cm3/1000s. 6.0 Aneroid pressure hPa 500 Rated speed rpm Del. quantity cm3/1000 strokes : 144.0 Tolerance cm3/1000 strokes : +-1.0 Check tolerance cm3/1000s. 4.0 **BREAKAWAY** Rack travel in mm: 11.10 Rated speed rpm : 1045 Tolerance 1/min

rack travel mm : 10.10
Tolerance mm : + 0.20
Del. quantity
cm3/1000 strokes : 160.0
Tolerance
cm3/1000 strokes : + 20.0
Check tolerance
cm3/1000s. : + 24.0

LOW IDLE

Rated speed rpm	•	250
rack travel mm	:	4.70
Tolerance mm	• +	0.30
Del. quantity	• '	0.00
cm3/1000 strokes	:	17.0
Tolerance		
cm3/1000 strokes	: +-	2.0
Check tolerance		
cm3/1000s.	: +-	5.0
Spreed		
Tolerance		
cm3/1000 strokes	:	4.0
Check tolerance		
cm3/1000s.	:	8.0

STARTING FUEL DELIVERY

100

Rated speed rpm

Note remarks

Refer to Service Info for test and adjustment instructions.

See microcard(s) W400/...

Edition : 09.03.95 Test oil : ISO 4113

Combination No. : 0402646609

Injection pump

Pump designation : PE6P12OA72ORS7188

: -10

EP type number : 0412626924

Governor

Governer design. : RQV200...950PA725

: -11

Governer no. : 0421814033

Cust. part No. : 1340418

Customer—spec. information Customer : SCANIA

Motor : DSC 11 36

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1417413025

Inlet press, bar : 2.5
Tolerance bar : +- 0.1

Overflow quantity

min. l/h : 230 Tolerance l/h : +- 20.0

Test nozzle holde

assembly : 1688901104

Opening pressure

bar : 251.5 Tolerance bar : + 1.5 Test Lines : 1680750008

Outside diameter : 6.0

x inside diameter: 2.0

x length mm : 600

REMARKS

Start-of-delivery setting with ROBO

diaphragm.

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.45
Tolerance mm : + 0.05

test only $: \leftarrow 0.10$

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.30

Check

tolerance *NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm: 13.85 Tolerance mm: + 0.05	Tolerance cm3/1000 strokes : +- 1.0 Check tolerance
Del. quantity cm3/1000 strokes : 252.0	cm3/1000s. : +- 4.0 Spreed Tolerance
Tolerance cm3/1000 strokes : + 1.0	cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0
Check tolerance cm3/1000s. : + 4.0	RATED SPEED
Spreed Tolerance	control lever
cm3/1000 strokes : 8.0	position degree : 62.0 tolerance degree : + 4.0
Check tolerance cm3/1000s. : 12.0	control lever position degree : 116.0
2nd speed rpm : 250	tolerance degree : +- 4.0
Rack travel in mm: 4.70 Tolerance mm: + 0.30 Del. quantity	rack travel mm : 12.80 Rated speed rpm : 995 Tolerance 1/min : +- 5
cm3/1000 strokes : 17.0 Tolerance cm3/1000 strokes : +- 3.0	rack travel mm : 4.00 Rated speed rpm : 1:25
Check tolerance cm3/1000s. : + 6.0	Tolerance 1/min : → 15 rack travel mm : 0.50
Spreed Tolerance cm3/1000 strokes : 4.0	rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1250
Check tolerance cm3/1000s. : 8.0	LOW IDLE
(B) SETTING OF INJECTION PUMP	
WITH GOVERNOR	<pre>control lever position degree : 64.0 tolerance degree : +- 4.0</pre>
GUIDE SLEEVE POSITION	control lever position degree : 10.0 tolerance degree : +- 4.0
control lever position degree : - 1 Rated speed rpm : 1150	Testing:
Rack travel in mm: 9.50 Tolerance mm: + 2.50	Rated speed rpm : 250 rack travel mm : 4.70 Tolerance mm : + 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 150
Rated speed rpm : 700	CRT mm min. :> 6.00
Aneroid pressure hPa : -	CONTINUOUS-ACTION CONTROL
Del. quantity + cm3/1000 strokes : 252.0 +	Rated speed rpm : 270

TORQUE CONTROL

Rated speed rpm : 700 rack travel mm : 13.85 Tolerance mm : + 0.05

Rated speed rpm : 950 rack travel mm : 13.85 Tolerance mm : + 0.05

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1500
rack travel mm : 13.85
Tolerance mm : +- 0.05

MEASUREMENT

Pressure hPa : Rated speed rpm : 500
rack travel mm : 9.30
Tolerance mm : + 0.20

Rated speed rpm : 500

Pressure hPa : 375
rack travel mm : 12.05
Tolerance mm : + 0.05

Pressure hPa : 185 rack travel mm : 11.00 Tolerance mm : + 0.15

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : -Rated speed rpm : 950

Del. quantity

cm3/1000 strokes : 237.0

Tolerance

cm3/1000 strokes : +- 4.0

Check tolerance

cm3/1000s. : +- 6.0

Aneroid pressure

Rated speed rpm : 500

Del. quantity

cm3/1000 strokes : 115.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : +- 4.0

BREAKAWAY

Rack travel in mm: 12.80
Rated speed rpm: 995
Tolerance 1/min: + 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 9.30 Tolerance mm : +- 0.20 Del. quantity cm3/1000 strokes : 125.0

Tolerance

cm3/1000 strokes : + 20.0

Check tolerance

cm3/1000s. : +- 24.0

LOW IDLE

Rated speed rpm 250 rack travel mm 4.70 Tolerance mm 0.30 Del. quantity cm3/1000 strokes : 17.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. 6.0 Spreed

Tolerance

cm3/1000 strokes : 4.0 Check tolerance

cm3/1000s. : 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 09.03.95 Test oil : ISO 4113

Combination No. : 0403246042

Injection pump

Pump designation : PES6MW100/720RS1522

EP type number : 0413206023

Governor

Governer design. : RQV300...1300MW148

: -7

Governer no. : 0420083328

Cust. part No. : 0250748102

Customer—spec. information Customer : MB-NFZ

Motor : 0M366LA Power KW : 155.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1419992198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1688901101

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5

Test Lines : 1680750089

Outside diameter : 8.0

x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant. per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 4.55
Tolerance mm : + 0.05

test only : \leftarrow 0.10

Rack travel in mm : <1.00

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.50

Check

tolerance °NW : + 0.75

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm : 13.45

Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 118.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : +- 3.0

Spreed

Tolerance		ما ما ما ما ما ما ما ما ما ما ما ما ما م
cm3/1000 strokes		+ guide sleeve
CIIDA (000 STLOKES	• 4.3	+ travel mm : 13.50 + Tolerance mm : +- 0.50
Check tolerance		+ Toterance mm : + 0.50
cm3/1000s.	: 7.0	Ī
CMD/ 10000:	. 7.0	GUIDE SLEEVE POSITION
2nd speed rpm	: 300	I doing speeds rostitor
che opeca i più	. 300	Rated speed rpm : 1500
Rack travel in mm	: 4.20	T Nated Speed (pill : 1500
Tolerance mm	: +- 0.20	Rack travel in mm: 10.00
Del. quantity		+ Tolerance mm : + 2.50
cm3/1000 strokes	: 12.0	To con an local man
Tolerance		
cm3/1000 strokes	: +- 2.0	+ FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance		+
cm3/1000S.	: +- 4.5	+ Rated speed rpm : 1300
Spreed		+ Aneroid pressure
Tolerance		+ hPa : 1200
cm3/1000 strokes	: 2.0	+ Del. quantity
Check tolerance		+ cm3/1000 strokes : 118.0
cm3/1000s.	: 4.0	+ Tolerance
		+ cm3/1000 strokes : +- 1.0
		+ Check tolerance
(B) SETTING OF INJ	JECTION PUMP	+ cm3/1000s. : +- 3.0
WITH GOVERNOR		+ Spreed
		+ Tolerance
0	-1	+ cm3/1000 strokes : 4.5
GUIDE SLEEVE TRAVE	:L	+ Check tolerance
Data dama da mon	. 700	+ cm3/1000s. : 7.0
	: 300	†
guide sleeve	. 0.02	DATES OFFER
travel mm	: 0.92 : + 0.25	+ RATED SPEED
Tolerance mm	. — 0.25	†
Rated speed rpm	: 1355	t control lever
guide sleeve	. 1333	position degree : 120.0
travel mm	: 9.32	tolerance degree : + 4.0
	: +- 0.25	T toterance degree . T 4.0
TOTEL ALICE IIMI	0.2	rack travel mm : 12.45
Rated speed rpm	: 1078	Rated speed rpm : 1345
guide sleeve	. 1070	Tolerance 1/min : + 5
travel mm	: 7.06	1 roter ance minimi.
Tolerance mm	: + 0.25	rack travel mm : 4.00
sor wires tinn		Rated speed rpm : 1475
Rated speed rpm	: 514	Tolerance 1/min : + 15
guide sleeve		Total and I million 1
travel mm	: 2.14	rack travel mm : 0.50
	: + 0.25	+ Tolerance mm : + 0.50
		+ Rated speed rpm : 1600
Rated speed rpm	: 564	1
guide sleeve		+
travel mm	: 2.60	+ LOW IDLE
Tolerance mm	: +- 0.25	+
		+
	: 740	+ control lever
guide sleeve	-	position degree : 74.0
travel mm	: 3.93	+ tolerance degree : + 4.0
Tolerance mm	: +- 0.25	+
	4===	† Testing:
Rated speed rpm	: 1720	+

Ontrod annual num	. 700	1
Rated speed rpm rack travel mm	: 300	+ Aneroid pressure
Tolerance mm		† hPa : 1200
roterance mm	; += 0.10	Rated speed rpm : 750
Dated annual man	. 200	+ Del. quantity
Rated speed rpm	: 200	+ cm3/1000 strokes : 114.0
AAT 1		+ Tolerance
CRT mm min.	: > 5.00	+ cm3/1000 strokes : +- 1.5
		+ Check tolerance
		
TORQUE CONTROL		+ Spreed
		† Tolerance
Rated speed rpm		+ cm3/1000 strokes : 6.0
rack travel mm	: 13.45	+ Check tolerance
Tolerance mm	: +- 0.05	+ cm3/1000s. : 9.0
		+
Rated speed rpm	: 750	+ Aneroid pressure
rack travel mm		+ hPa : 1200
Tolerance mm	: +- 0.10	+ Rated speed rpm : 1300
		+ Del. quantity
ANEROID/ALTITUDE		+ Tolerance
COMPENSATOR TEST		+ cm3/1000 strokes : + 1.5
		+ Check tolerance
		+ cm3/1000s. : + 3.0
SETTING		1
02112110		Aneroid pressure
Rated speed rpm	: 500	hPa : -
Pressure hPa	: 1200	Rated speed rpm : >00
rack travel mm		+ Del. quantity
Tolerance mm	: + 0.10	+ cm3/1000 strokes : 48.0
roter arice min	. +- 0.10	+ Tolerance
MEACHDEMENT		
MEASUREMENT		+ cm3/1000 strokes : +- 1.0
December 500		+ Check tolerance
Pressure hPa	500	+ cm3/1000s. : $+$ 3.0
Rated speed rpm		†
Tolerance mm	: ← 0.05	POPALANA
Dotted annual man	. 500	BREAKAWAY
Rated speed rpm	: 500	†
Deserve Los	. 000	Topoly desiral de march 40 45
Pressure hPa	: 800	+ Rack travel in mm: 12.45
rack travel mm	: 4.30	+ Rated speed rpm : 1345
Tolerance mm	: ← 0.10	+ Tolerance 1/min : + 5
December 10-	. 700	†
Pressure hPa	: 300	†
rack travel mm	: 1.20	AT 1 1 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Tolerance mm	: ← 0.10	+ STARTING FUEL DELIVERY
		Dehad and and and
STADE CUE OUT		Rated speed rpm : 100
START CUT-OUT		Del. quantity
Daniel and disco-	. > 400	- cm3/1000 strokes : 150.0
Rated speed rpm	: > 100	+ Tolerance
Check		- cm3/1000 strokes : + 5.0
speed 1/min	: > 80	+ Check tolerance
Rated speed rpm	: < 200	+ cm3/1000s. : + 8.0
Check		†
speed 1/min	: < 220	†
		†
FUEL DELTUEDY OUT	DACTEDICTICS	LOUITNIC
FUEL DELIVERY CHA	HAC LEKTO LTCO	+ LOW IDLE

Rated speed rpm	:	300
rack travel mm	:	4.20
Tolerance mm	: +	0.20
Del. quantity		
cm3/1000 strokes	:	12.0
Tolerance		
cm3/1000 strokes	: +-	2.0
Check tolerance		
cm3/1000s.	: +-	4.5
3preed		
Tolerance		
cm3/1000 strokes	:	2.0
Check tolerance		
cm3/1000s.	:	4.0
	-	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 09.03.95 Edition : ISO 4113 Test oil

Combination No. : 0403444154

Injection pump

Pump designation : PES4MW100/720RS1127

EP type number : 0413404103

Governor

Governer design. : RQV300...1300MW48-2

Governer no. : 0420083110

Cust. part No. : 0250746102

Customer-spec. information Customer : MB-NFZ : OM 364 A Motor

Power KW : 85.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C 40 Tolerance °C 2.0

Overflow valve : 1417413047

Inlet press. bar : 1.5

Test nozzle holde

: 1688901101 assembly

Opening pressure

208.5 bar : + 1.5 Tolerance bar

Test lines : 1680750089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +- 1.0

Prestroke mm 3.75 : +- 0.05 Tolerance mm

test only : + 0.10

Rack travel in mm : 10.50 : +- 1.50 Tolerance mm

Firing order : 1-3-4-2

Phasing : 0-90-180-270

Tolerance : + 0.50

Check

tolerance °NW : + 0.75

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm : 11.20 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 82.0

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Check tolerance

cm3/1000s. 3.0

Spreed

Tolerance

cm3/1000 strokes :

3.5

Check tolerance		+
cm3/1000s.	: 6.0	
2nd speed rpm	: 300	+ GUIDE SLEEVE POSITION
Rack travel in mm	: 7.85	+ control lever
	: +- 0.20	+ position degree : -1
Del. quantity		+ Rated speed rpm : 1330
cm3/1000 strokes Tolerance	: 11.0	+ Rack travel in mm : 16.50
cm3/1000 strokes	: + 2.0	+ Tolerance mm : + 1.30
Check tolerance		
	: + 4.5	
Spreed Tolerance		FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes	: 3.5	Rated speed rpm : 1300
Check tolerance		+ Aneroid pressure
cm3/1000s.	: 5.5	hPa : -
		+ Del. quantity + cm3/1000 strokes : 82.0
(B) SETTING OF INJE	ECTION PUMP	+ Tolerance
WITH GOVERNOR		+ cm3/1000 strokes : + 1.0
		+ Check tolerance + cm3/1000s. : +- 3.0
GUIDE SLEEVE TRAVEL	L	F Spreed
		Tolerance
Rated speed rpm : guide steeve	: 300	+ cm3/1000 strokes : 3.5 + Check tolerance
travel mm :	: 1.40	+ cm3/1000s. : 6.0
	+ 0.25	+
Rated speed rpm :	: 1345	RATED SPEED
guide sleeve	. 1343	T RATED SPEED
travel mm :		1
Tolerance mm :	: +- 0.25	control lever
Rated speed rpm :	: 877	<pre>position degree : 114.0 tolerance degree : +- 4.0</pre>
quide sleeve		+ 4.0
	5.00	rack travel mm : 10.10
Tolerance mm :	: + 0.25	Rated speed rpm : 1345 Tolerance 1/min : +- 5
Rated speed rpm :	363	Total and I mini
guide sleeve		rack travel mm : 4.00
travel mm : Tolerance mm :	2.05 + 0.25	+ Rated speed rpm : 1435 + Tolerance 1/min : +- 15
roterance mm :	- 0.2 5	Toterance Min : 15
Rated speed rpm :	413	rack travel mm : 0.50
guide steeve	2.50	Tolerance mm : + 0.50
travel mm : Tolerance mm :	2.50 - + 0.25 -	+ Rated speed rpm : 1550
TOCOT GETOC THIS	•	
Rated speed rpm :	490 -	LOW IDLE
guide sleeve travel mm :	2.93	<u> </u>
	+ 0.25	control lever
	4/00	position degree : 83.0
Rated speed rpm : guide sleeve	1600 -	tolerance degree : +- 4.0
travel mm :	11.50	Testing:
	+ 0.50	+

Rated speed rpm	: 300	+	Del. quantity
rack travel mm	: 7.85	1	cm3/1000 strokes
Tolerance mm	: + 0.05	+	Tolerance
		+	cm3/1000 strokes
Rated speed rpm	: 100	+	Check tolerance
_		+	cm3/1000s.
CRT mm min.	: > 9.50	+	
		+	
TORQUE CONTROL			BREAKAWAY
		+	
Rated speed rpm	: 1300	+	Rack travel in mm
rack travel mm	: 11.20	+	Rated speed rpm
Tolerance mm	: ← 0.05	†	Tolerance 1/min
Rated speed rpm	: 750	†	
rack travel mm	: 750 : 11.90	I	
Tolerance mm	: + 0.15	I	STARTING FUEL DELIV
rocci di ice imi	0.15	I	DINKITING LOST DEST
Rated speed rpm	: 585	+	Rated speed rpm
rack travel mm	: 12.10	+	Del. quantity
Tolerance mm	: +- 0.10	+	cm3/1000 strokes
		+	Tolerance
Rated speed rpm	: 1000	+	cm3/1000 strokes
rack travel mm	: 11.35	+	Check tolerance
Tolerance mm	: + 0.10	t	cm3/1000s.
		†	
		†	
START CUT-OUT		I	
		1	LOW IDLE
Räted speed rpm	: > 100	+	
Check		+	Rated speed rpm :
speed 1/min	: > 80	+	rack travel mm
Rated speed rpm	: < 230	+	Tolerance mm
Check		,	Del. quantity
speed 1/min	: < 250	Ť	cm3/1000 strokes
		†	Tolerance
FUEL DELTMEDY CUA	DACTEDISTICS		cm3/1000 strokes
FUEL DELIVERY CHA	IKAC I EKTO I TCO	Ī	Check tolerance cm3/1000s.
Aneroid pressure		I	Spreed .
hPa	: -	1	Tolerance
Rated speed rpm	: 750	1	cm3/1000 strokes :
Del. quantity	-	+	Check tolerance
cm3/1000 strokes	: 78.0	+	cm3/1000s. :
Tolerance		+	
cm3/1000 strokes	: + 1.5	+	
Check tolerance		+	
cm3/1000s.	: +- 4.0	+	
Spreed		+	
Tolerance		+	
cm3/1000 strokes	: 5.0	†	
Check tolerance	. 7.0	†	
cm3/1000s.	: 7.0	†	
Ananoid processes		Ţ	
Aneroid pressure hPa		I	
Rated speed rpm	585	I	
hated speed thill	. ,,,,,	I	

: 74.0 : + 1.5 : +- 4.0 : 10.10 : 1345 : + 5 IVERY : 100 : 83.0 : +- 5.0 : +- 8.0 : 300 : 7.85 : + 0.20 11.0 : +- 2.0 : +- 4.5 3.5 : 5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 09.03.95 Edition : ISO 4113 Test oil

Combination No. : 0403446231

Injection pump

Pump designation : PES6MW100/720RS1144

EP type number : 0413406138

Governor

Governer design. : RQV300...1400MW48-8

Governer no. : 0420083175

Cust. part No. :

Customer-spec. information : MB-NFZ Customer : OM 366 A Motor Power KW : 125.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C 40 Tolerance °C 2.0

Overflow valve : 1417413047

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1688901101

Opening pressure

208.5 Tolerance bar : +- 1.5

Test lines : 1680715015

Outside diameter : 6.0

x inside diameter: 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm 3.55 : +- 0.05 Tolerance mm

test only : +- 0.10

Rack travel in mm : 10.50 : +- 1.50 Tolerance mm

: 1-5-3-6-2-Firing order

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance °NW : **←** 0.75

BASIC SETTING

Rated speed rpm : 1400

Rack travel in mm : 10.95 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 75.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : +-3.0

Spreed

Tolerance

cm3/1000 strokes : 3.5

	tolerance degree : +- 4.0
Check tolerance	+
cm3/1000s. : 6.0	rack travel mm : 9.90
2nd speed rpm : 300	Rated speed rpm : 1445 Tolerance 1/min : +- 5
	+
Rack travel in mm: 8.05	+ rack travel mm : 4.00
Tolerance mm : + 0.25 Del. quantity	+ Rated speed rpm : 1550 + Tolerance 1/min : + 15
cm3/1000 strokes : 11.0	Toterance (7)(i)(i) : +- 13
Tolerance	rack travel mm : 0.50
cm3/1000 strokes : +- 2.0	+ Tolerance mm : + 0.50
Check tolerance cm3/1000s. : +- 4.5	Rated speed rpm : 1650
Spreed 4.5	I -
Tolerance	+ LOW IDLE
cm3/1000 strokes : 3.5	†
Check tolerance cm3/1000s. : 5.5	t control lever
(110) 10003.	+ position degree : 88.0
	tolerance degree : + 4.0
(B) SETTING OF INJECTION PUMP	†
WITH GOVERNOR	† Testing:
	Rated speed rpm : 300
	+ rack travel mm : 8.05
GUIDE SLEEVE POSITION	Tolerance mm : + 7.25
	+ Rated speed rpm : 100
control lever	1
position degree : -1	+ CRT mm min. :> 9.50
Rated speed rpm : 1470	
Rack travel in mm: 16.50	TORQUE CONTROL
Tolerance mm : + 1.30	+
	+ Rated speed rpm : 1400 + rack travel mm : 10.95
FULL LOAD DELIVERY AT FULL LOAD STOP	Tolerance mm : + 0.05
	+
Rated speed rpm : 1400	Rated speed rpm : 750
Aneroid pressure hPa : -	rack travel mm : 12.20 Tolerance mm : + 0.10
Del. quantity	Total alice half . Total
cm3/1000 strokes : 75.0	Rated speed rpm : 950
Tolerance - cm3/1000 strokes : + 1.0	+ rack travel mm : 11.95 + Tolerance mm : + 0.15
cm3/1000 strokes : + 1.0 - Check tolerance -	Tolerance mm : +- 0.15
cm3/1000s. : + 3.0	Rated speed rpm : 1200
Spreed	rack travel mm : 11.15
Tolerance - cm3/1000 strokes : 3.5	Tolerance mm : + 0.15
Check tolerance	
cm3/1000s. : 6.0	
-	START CUT-OUT
RATED SPEED	Rated speed rpm :> 100
THIEF OF EED	Check
	speed 1/min : > 80
control lever position degree : 119.0	Rated speed rpm : < 200
position degree : 119.0	Γ

Tolerance 1/min : + STARTING FUEL DELIVER Rated speed rpm : Del. quantity cm3/1000 strokes : Tolerance cm3/1000 strokes : + Check tolerance cm3/1000s. : + LOW IDLE Rated speed rpm : rack travel mm : Tolerance mm : + Del. quantity	750 78.0 - 1.5 - 4.0 5.0 7.0
Rated speed rpm : Del. quantity cm3/1000 strokes : Tolerance cm3/1000 strokes : + Check tolerance cm3/1000 strokes : + Spreed Tolerance cm3/1000 strokes : Check tolerance cm3/1000 strokes : Check tolerance cm3/1000s. : BREAKAWAY Rack travel in mm : Rated speed rpm : Tolerance 1/min : + STARTING FUEL DELIVER Rated speed rpm : Del. quantity cm3/1000 strokes : + Check tolerance cm3/1000 strokes : + Check tolerance cm3/1000s. : + LOW IDLE Rated speed rpm : rack travel mm : Tolerance mm : + Del. quantity	78.0 1.5 4.0 5.0
Tolerance cm3/1000 strokes : + Check tolerance cm3/1000s. : + Spreed Tolerance cm3/1000 strokes : Check tolerance cm3/1000s. : : BREAKAWAY Rack travel in mm : Rated speed rpm : Tolerance 1/min : + STARTING FUEL DELIVER Rated speed rpm : Del. quantity cm3/1000 strokes : + Check tolerance cm3/1000 strokes : + Check tolerance cm3/1000s. : + LOW IDLE Rated speed rpm : rack travel mm : Tolerance mm : + Del. quantity	- 4.0 5.0
Tolerance cm3/1000 strokes: Check tolerance cm3/1000s.: BREAKAWAY Rack travel in mm: Rated speed rpm: Tolerance 1/min: + STARTING FUEL DELIVER Rated speed rpm: Del. quantity cm3/1000 strokes: Tolerance cm3/1000 strokes: + Check tolerance cm3/1000s.: + LOW IDLE Rated speed rpm: rack travel mm: Tolerance mm: + Del. quantity	
Rack travel in mm : Rated speed rpm : Tolerance 1/min : + STARTING FUEL DELIVER Rated speed rpm : Del. quantity cm3/1000 strokes : Tolerance cm3/1000 strokes : + Check tolerance cm3/1000s. : + LOW IDLE Rated speed rpm : rack travel mm : Tolerance mm : + Del. quantity	·
Rated speed rpm : Tolerance 1/min : + STARTING FUEL DELIVER Rated speed rpm : Del. quantity cm3/1000 strokes : Tolerance cm3/1000 strokes : + Check tolerance cm3/1000s. : + LOW IDLE Rated speed rpm : rack travel mm : Tolerance mm : + Del. quantity	
Rated speed rpm : Del. quantity cm3/1000 strokes : Tolerance cm3/1000 strokes : + Check tolerance cm3/1000s. : + LOW IDLE Rated speed rpm : rack travel mm : Tolerance mm : + Del. quantity	9.90 - 1445 - - 5 -
Del. quantity cm3/1000 strokes : Tolerance cm3/1000 strokes : + Check tolerance cm3/1000s. : + LOW IDLE Rated speed rpm : rack travel mm : Tolerance mm : + Del. quantity	Y -
Rated speed rpm : rack travel mm : Tolerance mm : + Del. quantity	100 85.0 - 5.0 - 8.0
Rated speed rpm : rack travel mm : Tolerance mm : + Del. quantity	
cm3/1000 strokes : Tolerance cm3/1000 strokes : + Check tolerance cm3/1000S. : + Spreed Tolerance cm3/1000 strokes : Check tolerance	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 15.03.95 Edition Test oil : ISO 4113

Combination No. : 0403476117

Injection pump

Pump designation : PES6MW?00/720RS1131

: -1

: 0413406165 EP type number

Governor

Governer design. : RSV750...1200MW0A329

: -15

: 0420085193 Governer no.

Cust. part No. : 0220748502

Customer-spec. information : MB-NFZ Customer

Motor : 0M366LA Power KW : 148.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 1419992198

Inlet press. bar : 1.5

Test nozzle holde

: 1688901101 assembly

Opening pressure

208.5 bar : +~ 1.5 Tolerance bar

: 1680750089 Test lines

Outside diameter : 8.0

x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar: 31.0 Tolerance bar : + 1.0

Prestroke mm 3.65 : + 0.05Tolerance mm

test only : ← 0.10

Rack travel in mm : 19.50 Tolerance mm : + 1.50

: 1-5-3-6-2-Firing order

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.50

Check

tolerance °NW : + 0.75

BASIC SETTING

Rated speed rpm : 1180

Rack travel in mm : 13.15 Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 104.0

Tolerance

cm3/1000 strokes : +-1.0

Check tolerance

cm3/1000s. : +- 3.0

Spreed

Tolerance +	
cm3/1000 strokes : 3.5	RATED SPEED
Check tolerance	RATED SPEED
cm3/1000s. : 6.0	
2nd speed rpm : 750	control lever position degree : 97.0 tolerance degree : +- 4.0
Rack travel in mm: 5.05	toterance degree : +- 4.0
Tolerance mm : + 0.25	rack travel mm : 1.00
Del. quantity + cm3/1000 strokes : 12.0 +	Tolerance mm : +- 0.70 Rated speed rpm : 1400
Tolerance	Rated speed rpiii : 1400
cm3/1000 strokes : + 2.0 +	
Check tolerance + 4.5 +	LOW IDLE
Spreed	
Tolerance	control lever
cm3/1000 strokes : 3.5	position degree : 76.0 tolerance degree : +- 4.0
cm3/1000s. : 5.5	-
<u>†</u>	Testing:
(B) SETTING OF INJECTION PUMP	Rated speed rpm : 750
WITH GOVERNOR +	rack travel mm : 5.05
1	Tolerance mm : +- 0.25
GUIDE SLEEVE POSITION	rack travel mm : 2.00
Total Steel Collison	Rated speed rpm : 100
control lever	CRT mm min. : > 19.00
position degree : -3 + Rated speed rpm : 800 +	
Rated speed rpm : 800	TORQUE CONTROL
Rack travel in mm: 0.65	
Tolerance mm : + 0.35	Rated speed rpm : 1180 rack travel mm : 13.15
governor spring	Tolerance mm : + 0.05
pre-tension +	
click setting x : 4.00	Rated speed rpm : 600 rack travel mm : 13.15
	Tolerance mm : + 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP	
Rated speed rpm : 1180 +	ANEROID/ALTITUDE
Aneroid pressure	COMPENSATOR TEST
hPa : 1000 + Del. quantity +	
cm3/1000 strokes : 104.0	SETTING
Tolerance cm3/1000 strokes : + 1.0	Rated speed rpm : 500
Check tolerance	Rated speed rpm : 500 Pressure hPa : 1000
cm3/1000s. : + 3.0	rack travel mm : 13.15
Spreed +	Tolerance mm : + 0.05
cm3/1000 strokes : 3.5	MEASUREMENT
Check tolerance	
cm3/1000s. : 6.0	Pressure hPa : - Rated speed rpm : 500
- I	· · · · · · · · · · · · · · · · · · ·

Tolerance mm	: ← 0.05
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 500 : 2.20 : ← 0.15
Pressure hPa rack travel mm Tolerance mm	: 350 : 1.10 : ← 0.05
FUEL DELIVERY CHA	ARACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes	: 97.0 : ← 1.5 : ← 4.0 : 5.0 : 7.0 : 500
STARTING FUEL DEL	
Rated speed rpm	: 100
Del. quantity cm3/1000 strokes	: 105.0
Tolerance cm3/1000 strokes	: ← 5.0
Check tolerance cm3/1000s.	: ← 8.0
LOW IDLE	

rack travel mm Tolerance mm	: : +-	5.05 0.25
Del. quantity cm3/1000 strokes	:	12.0
Tolerance cm3/1000 strokes	: +-	2.0
Check tolerance cm3/1000s. Spreed	: +-	4.5
Tolerance cm3/1000 strokes	:	3.5
Check tolerance cm3/1000s.	:	5.5

Rated speed rpm : 750

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 21.02.95 Edition : ISO 4113 Test oil

Combination No. : 0400074961

Injection pump

Pump designation : PES4M55C32DRS107-1

EP type number : 0410054977

Governor

Governer design. : RSF375/2250M18

Governer no. : 0420021017

Cust. part No. :

Customer-spec. information

: MB-PKW Customer

: 0M616 (2.4 L) Motor

Power KW : 53.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C 40 Tolerance °C 2.0

Overflow valve : 1417413012

Inlet press. bar : 1.0

Test nozzle holde

: 1688901111 assembly

Opening pressure

148.5 : **←** 1.5 Tolerance bar

: 1680750014 Test lines

Outside diameter : 6.0

x inside diameter: 2.0

H₀9

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm 2.25 : + 0.05 Tolerance mm

: + 0.10 test only

Rack travel in mm : 20.00

Firing order : 1-3-4-2

Phasing : 0-90-180-270

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm: 13.45 Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 40.5

Tolerance

cm3/1000 strokes : +- 0.5

Check tolerance

cm3/1000s. : **←** 1.5

Spreed

Tolerance

cm3/1000 strokes : 2.5

Check tolerance

3.0 cm3/1000s.

375 2nd speed rpm :

N. 1	1
Del. quantity cm3/1000 strokes : 7.5	† SET IDLE AUXILIARY SPRING
Tolerance cm3/1000 strokes : +- 0.5	Potest arrest arrest (50
Spreed	+ Rated speed rpm : 450 + rack travel mm : 4.90
Tolerance	Tolerance mm : + 0.10
cm3/1000 strokes : 1.0	2.00
	rack travel mm : 2.00 Rated speed rpm : 770
(B) SETTING OF INJECTION PUMP	Tolerance 1/min : + 50
WITH GOVERNOR	+ Load pick-up
	+ Eodu pick-up
IDLE STAGE	+ Rated speed rpm : 250
	T CRT num min. : > 11.00
Rack travel in mm : 6.00	+
Tolerance mm : +- 0.15	Rated speed rpm : 1000
	+ CRT mm max. : 1.45
FULL LOAD DELIVERY AT FULL LOAD STOP	+
Rated speed rpm : 1000	rack travel mm : 6.10 Rated speed rpm : 375
Ref. pressure	+ Nated speed (pill . 3/3
ALDA / ADA hPa : -	+
Del. quantity cm3/1000 strokes : 40.5	TORQUE CONTROL
Tolerance	+
cm3/1000 strokes : + 0.5	Rated speed rpm : 1000
Check tolerance cm3/1000s. : +- 1.5	rack travel mm : 13.45 Tolerance mm : + 0.05
Spreed	+
Tolerance	Rated speed rpm : 1800
cm3/1000 strokes : 2.5 Check tolerance	rack travel mm : 12.90 Tolerance mm : + 0.10
cm3/1000s. : 3.0	+
	+ Rated speed rpm : 2200 + rack travel mm : 12.60
RATED SPEED	+ Tolerance mm : + 0.10
	+
control lever	İ
position degree : 50.0	+
rack travel mm : 8.40	+ FUEL DELIVERY CHARACTERISTICS
Rated speed rpm : 2500	+ FUEL DELIVERY CHARACTERISTICS
	Ref. pressure
rack travel mm : 0.50 Tolerance mm : + 0.50	+ ALDA / ADA hPa : - + Rated speed rpm : 1800
Rated speed rpm : 2950	+ Del. quantity
	+ cm3/1000 strokes : 39.5
SET IDLE CONTROL LEVER POSITION	+ Tolerance + cm3/1000 strokes : +- 1.0
OF! TAPE COLLINGE FEATU LOOTITOIA	+ Check tolerance
Rated speed rpm : 1000	+ cm3/1000s. : + 2.0
CRT mm max. : 1.45	+ Spreed + Tolerance
ONT HAIR THANKS OF TITE	+ cm3/1000 strokes : 2.5
LAUL TALE	Check tolerance
LOW IDLE	+ cm3/1000s. : 3.0
U40	

Ref. pressure ALDA / ADA hPa Rated speed rpm : 2200 Spreed Del. quantity cm3/1000 strokes : 41.5 Tolerance cm3/1000 strokes : +-1.0 Check tolerance cm3/1000s. 2.0 Spreed Tolerance cm3/1000 strokes : 2.5 Check tolerance cm3/1000s. 3.0 HIGH IDLE Rated speed rpm 2500 8.40 rack travel mm Tolerance mm : **←** 0.20 Del. quantity cm3/1000 strokes : 25.0 Tolerance cm3/1000 strokes : +-2.0 Check tolerance cm3/1000s. 3.0 : +-Spreed Tolerance cm3/1000 strokes : 2.5 Check tolerance cm3/1000s.3.0 STARTING FUEL DELIVERY Rated speed rpm 100 rack travel mm 20.13 : Del. quantity cm3/1000 strokes : 53.0 Spreed Tolerance cm3/1000 strokes : 6.0

LOW IDLE

Rated speed rpm : 375
rack travel mm : 6.10
Tolerance mm : + 0.10
Del. quantity
cm3/1000 strokes : 8.3

Check tolerance cm3/1000s. : +- 1.8 Spreed

Check tolerance

cm3/1000s. : 1.5

CHECKING THE IDLE-SPEED AUXILIARY

degree : > 47.00

degree : < 30.00

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 20.02.95

Test oil : ISO 4113

Combination No. : 0400074978

Injection pump

Pump designation : PES4M50C320RS103

EP type number : 0410054023

Governor

Governer design. : RSF375/2250M19

Governer no. : 0420021018

Cust. part No. :

Customer-spec. information

Customer : MB-PKW

Motor

: 0M615 (2.0 L)

Power KW

: 44.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C

Tolerance °C

: +- 2.0

Overflow valve : 1417413012

40

Inlet press. bar : 1.0

Test nozzle holde

assembly

: 1688901111

Opening pressure

: 148.5

Tolerance bar

Test lines : 1680750003

Outside diameter : 6.0

x inside diameter:

x Length mm : 600

2.0

H12

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 31.0 Tolerance bar : +- 1.0

Prestroke mm Tolerance mm : +- 0.05

test only : + 0.10

Rack travel in mm: 20.00 Tolerance mm : +- 1.50

Firing order : 1-3-4-2

1.75

Phasing : 0-90-180-270

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm: 12.25 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 33.5

Tolerance

cm3/1000 strokes : + 0.5

Check tolerance cm3/1000s.

: +- 2.0

Spreed

Tolerance

cm3/1000 strokes :

2.5

3.0

Check tolerance cm3/1000s.

2nd speed rpm : 375

. 1	1
Del. quantity cm3/1000 strokes : 8.0	+ SET IDLE AUXILIARY SPRING
Tolerance	+ DEL IDEE MONIETAKT OLKING
cm3/1000 strokes : +- 0.5	+ Rated speed rpm : 450
Spreed	rack travel mm : 5.20 Tolerance mm : + 0.10
Tolerance cm3/1000 strokes : 1.0	Tolerance mm : + 0.10
CIIDA FUUU SEPUKES : 1.U	rack travel mm : 2.00
	Rated speed rpm : 770
(B) SETTING OF INJECTION PUMP	+ Tolerance 1/min : + 50
WITH GOVERNOR	†
	Load pick-up
IDLE STAGE	Rated speed rpm : 250
TORE OTHER	T Nated speed (pill . 250
	+ CRT mm min. : > 12.00
Rack travel in mm : 6.00	+
Tolerance mm : + 0.15	+ Rated speed rpm : 1000
	+ CRT mm max. : 1.45
FULL LOAD DELIVERY AT FULL LOAD STOP	T UKI IMB Hax. : 1.45
. The source of the source of	rack travel mm : 6.50
Rated speed rpm : 1000	Rated speed rpm : 375
Ref. pressure	†
ALDA / ADA hPa : -	†
Del. quantity cm3/1000 strokes : 33.5	TORQUE CONTROL
Tolerance	I TOUGHT CONTROL
cm3/1000 strokes : +- 0.5	Rated speed rpm : 1000
Check tolerance	rack travel mm : 12.25
cm3/1000s. : + 2.0	+ Tolerance mm : + 0.05
Spreed Tolerance	+ Rated speed rpm : 1800
cm3/1000 strokes : 2.5	+ Rated speed rpm : 1800 + rack travel mm : 11.80
Check tolerance	rack travel mm : 11.80 Tolerance mm : + 0.10
cm3/1000s. : 3.0	+
	+ Rated speed rpm : 2200
RATED SPEED	rack travel mm : 11.40 Tolerance mm : + 0.10
KAIED SPEED	T Toterance min : + 0.10
	<u>,</u>
control lever	+
position degree : 50.0	+
rack travel mm : 6.90	FUEL DELIVERY CHARACTERISTICS
Rated speed rpm : 2500	T FOEL DELIVERY CHARACTERISTICS
The second section of the second seco	Ref. pressure
rack travel mm : 0.50	+ ALDA / ADA hPa : -
Tolerance mm : + 0.50	+ Rated speed rpm : 1800
Rated speed rpm : 2950	+ Del. quantity + cm3/1000 strokes : 33.5
	+ Tolerance : 55.5
SET IDLE CONTROL LEVER POSITION	+ cm3/1000 strokes : +- 1.0
	+ Check tolerance
Rated speed rpm : 1000	+ cm3/1000s. : +- 2.0
4 /F	+ Spreed
CRT mm max. : 1.45	+ Tolerance + cm3/1000 strokes : 2.5
	+ Check tolerance
LOW IDLE	- cm3/1000s. : 3.0
	,
1.47	

Ref. pressure ALDA / ADA hPa Rated speed rpm 2200 Spreed Del. quantity cm3/1000 strokes : 35.0 Tolerance cm3/1000 strokes : +-1.0 Check tolerance cm3/1000s. : +-2.0 Spreed Tolerance cm3/1000 strokes : 2.5 Check tolerance cm3/1000s. 3.0 HIGH IDLE Rated speed rpm 2500 rack travel mm 6.90 Tolerance mm 0.20 Del. quantity cm3/1000 strokes : 15.0 Tolerance cm3/1000 strokes : +-2.0 Check tolerance cm3/1000s. 3.0 : +-Spreed Tolerance cm3/1000 strokes : 2.5 Check tolerance cm3/1000s. 3.0 STARTING FUEL DELIVERY Rated speed rpm 100 rack travel mm 20.10 : Del. quantity cm3/1000 strokes : 55.0 Spreed Tolerance cm3/1000 strokes : 6.0 LOW IDLE Rated speed rpm 375 6.50 rack travel mm

0.10

8.8

Check tolerance cm3/1000s. : + 1.8 Spreed Check tolerance cm3/1000s. : 1.5

CHECKING THE IDLE-SPEED AUXILIARY

degree : > 47.00 degree : < 30.00

Tolerance mm Del. quantity

cm3/1000 strokes :

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 22.02.95 Edition Test oil : ISO 4113

Combination No. : 0400075991

Injection pump

Pump designation : PES5M55C32ORS108-1

EP type number : 0410055992

Governor

Governer design. : RSF350/2300M15

Governer no. : 0420021014

Cust. part No. :

Customer-spec. information

Customer : MB-PKW

Motor : 0M617 (3.0 L)

: 65.0 Power KW

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance *C : +- 2.0

Overflow valve : 1417413012

Inlet press. bar : 1.0

Test nozzle holde

: 1688901111 assembly

Opening pressure

148.5 bar Tolerance bar

Test lines : 1680750014

Outside diameter : 6.0

x inside diameter : 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 31.0 Tolerance bar : + 1.0

Prestroke mm 2.25 : + 0.05Tolerance mm

test only : + 0.10

Rack travel in mm: 20.00

Firing order : 1-2-4-5-3

Phasing : 0-72-144-216-288

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm : 13.45 Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 40.5

Tolerance

cm3/1000 strokes : +-0.5

Check tolerance

cm3/1000s. 1.5

Spreed

Tolerance

cm3/1000 strokes : 2.5

Check tolerance

cm3/1000s. 3.0

2nd speed rpm 350

Del. quantity

cm3/1000 strokes : 7.5

Tolerance cm3/1000 strokes : +- 0.5 Spreed Tolerance cm3/1000 strokes : 1.0	control lever position degree : 11.0 tolerance degree : + 2.0 SET IDLE AUXILIARY SPRING
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Rated speed rpm : 450 rack travel mm : 4.70 Tolerance mm : + 0.10
IDLE STAGE Rack travel in mm : 6.00	rack travel mm : 2.00 Rated speed rpm : 770 Tolerance 1/min : + 50
Tolerance mm : + 0.15	Load pick-up
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 250
	CRT mm min. : > 10.00
Ref. pressure	Rated speed rpm : 1000
ALDA / ADA hPa : - Del. quantity cm3/1000 strokes : 40.5	CRT mm mex. : 1.45
Tolerance	rack travel mm : 6.10
cm3/1000 strokes : + 0.5 Check tolerance	Rated speed rpm : 750
cm3/1000s. : +- î.5 Spreed	
Tolerance cm3/1000 strokes : 2.5	TORQUE CONTROL
Check tolerance cm3/1000s. : 3.0	Rated speed rpm : 1000 rack travel mm : 13.45 Tolerance mm : + 0.05
RATED SPEED	Rated speed rpm : 1800 rack travel mm : 13.10 Tolerance mm : + 0.10
control lever position degree : 50.0	Rated speed rpm : 2200
rack travel mm : 8.80 Rated speed rpm : 2500	rack travel mm : 12.60 Tolerance mm : + 0.10
rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 2950	<u> </u>
	fuel delivery characteristics
SET IDLE CONTROL LEVER POSITION	Ref. pressure
Rated speed rpm : 1000	+ Rated speed rpm : 1800
CRT mm max. : 1.45	Del. quantity cm3/1000 strokes : 39.5
LOUTOUE	+ Tolerance + cm3/1000 strokes : +- 1.0
LOW IDLE	+ Check tolerance + cm3/1000s. : + 2.0
	+ Spreed

Tolerance cm3/1000 strokes : 2.5 Check tolerance cm3/1000s. 3.0 Ref. pressure ALDA / ADA hPa Rated speed rpm 2200 Spreed Del. quantity cm3/1000 strokes : 41.5 Tolerance cm3/1000 strokes : +-1.0 Check tolerance cm3/1000s. : +-2.0 Spreed Tolerance 2.5 cm3/1000 strokes : Check tolerance cm3/1000s. 3.0 : HIGH IDLE Rated speed rpm 2500 rack travel mm 8.80 Tolerance mm 0.20 Del. quantity cm3/1000 strokes : 25.0 Tolerance cm3/1000 strokes : +-2.0 Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 2.5 Check tolerance cm3/1000s.3.0 STARTING FUEL DELIVERY Rated speed rpm 100 rack travel mm 20.10 Del. quantity cm3/1000 strokes : 53.0 Spreed Tolerance cm3/1000 strokes : 6.0 LOW IDLE

: + 0.10Tolerance mm Del. quantity cm3/1000 strokes : 8.3 Check tolerance cm3/1000s. : +- 1.8 Spreed Check tolerance cm3/1000s. 1.5 CHECKING THE IDLE-SPEED AUXILIARY degree : > 47.00 degree : < 30.00 SETTING/TESTING ELECTRONIC IDLE REGULATION (ELR) control lever position degree : 11.0 tolerance degree : + 2.0 control lever position degree : 50.0 Adjustment of the control-rod travel sensor control lever position degree : 50.0

Rated speed rpm : 350 rack travel mm : 6.10

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 07.03.95 Test oil : ISO 4113

Combination No. : 0400844095

Injection pump

Pump designation : PES4A95D410RS2809

EP type number : 0410894993

Governor

Governer design. : RQV300...1400AB1065

: -23L

Governer no. : 0420212227

Cust. part No. :

Customer—spec. information
Customer : MB-NFZ
Motor : OM 364
Power KW : 65.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. $^{\circ}$ C : 40 Tolerance $^{\circ}$ C : + 2.0

Overflow valve : 1419992198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0681343009

Opening pressure

bar : 173.5 Tolerance bar : + 1.5

Test Lines : 1680750015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant. per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.25
Tolerance mm : + 0.05

test only : \leftarrow 0.10

Rack travel in mm : ^7.50
Tolerance mm : + 1.50

Firing order : 1-3-4-2

Phasing : 0-90-180-270

Tolerance : + 0.50

Check

tolerance °NW : + 0.75

BASIC SETTING

Rated speed rpm : 1400

Rack travel in mm : 9.95
Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 65.5

Tolerance

cm3/1000 strokes : +- 0.5

Check tolerance

cm3/1000s. : +- 2.5

Spreed

Tolerance

cm3/1000 strokes : 3.5

	+ tolerance degree : +- 4.0
Check tolerance cm3/1000s. : 6.0	+ rack travel mm : 8.90
tilis/ (8005. ; 0.0	+ rack travel mm : 8.90 + Rated speed rpm : 1455
2nd speed rpm : 300	Tolerance 1/min : + 5
	+
Rack travel in mm: 8.50	+ rack travel mm : 4.00
Tolerance mm : +- 0.10 Del. quantity	+ Rated speed rpm : 1550 + Tolerance 1/min : + 15
cm3/1000 strokes : 10.0	T roterance min : +- 15
Tolerance	rack travel mm : 0.50
cm3/1000 strokes : + 2.0	† Tolerance mm : + 0.50
Check tolerance : +- 4.5	+ Rated speed rpm : 1670
cm3/1000s. : +- 4.5 Spreed	İ
Tolerance	LOW IDLE
cm3/1000 strokes : 3.5	1
Check tolerance	+
cm3/1000s. : 5.5	+ control lever
	+ position degree : 77.0
(B) SETTING OF INJECTION PUMP	tolerance degree : + 4.0
WITH GOVERNOR	Testing:
	+
	+ Rated speed rpm : 300_
GUIDE SLEEVE POSITION	rack travel mm : 8.50 Tolerance mm : + 9.10
GOIDE SCEENE POSITION	Trocerance man 1.10
	+ Rated speed rpm : 100
control lever	+
position degree : -1	+ CRT mm min. :> 9.60
Rated speed rpm : 1450	İ
Rack travel in mm : 16.50	CONTINUOUS-ACTION CONTROL
Tolerance mm : + 1.30	+
	+ Rated speed rpm : 625
FULL LOAD DELIVERY AT FULL LOAD STOP	I
TOLE BOTTO PERSONNELL THE COMP CHO	TORQUE CONTROL
Rated speed rpm : 1400	+
Aneroid pressure	Rated speed rpm : 1400
hPa : -	rack travel mm : 9.95
Del. quantity cm3/1000 strokes : 65.5	Tolerance mm : +- 0.05
Tolerance	Rated speed rpm : 400
cm3/1000 strokes : +- 0.5	+ rack travel mm : 10.80
Check tolerance	Tolerance mm : + 0.10
cm3/1000s. : + 2.5	t Dated aread mm . (70
Spreed Tolerance	+ Rated speed rpm : 670 + rack travel mm : 10.60
cm3/1000 strokes : 3.5	+ Tolerance mm : + 0.10
Check tolerance	1
cm3/1000s. : 6.0	+ Rated speed rpm : 1060
	rack travel mm : 10.25 Tolerance mm : + 0.15
DATEN CREEN	† Tolerance mm : + 0.15
RATED SPEED	I
control lever	
	+ START CUT-OUT
position degree : 115.0	START CUT-OUT

100 Rated speed rpm :> Check speed 1/min : > 80 Rated speed rpm : < 220 Check speed 1/min 240 : < FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa Rated speed rpm 400 Del. quantity cm3/1000 strokes : 49.5 Tolerance cm3/1000 strokes : + 1.5Check tolerance cm3/1000s. 4.0 **BREAKAWAY** Rack travel in mm: 8.90 Rated speed rpm : 1455 Tolerance 1/min : +-STARTING FUEL DELIVERY Rated speed rpm 100 15.00 rack travel mm Tolerance mm : + 0.20Del. quantity cm3/1000 strokes : 83.0 Tolerance cm3/1000 strokes : +-5.0 Check tolerance cm3/1000s.8.0 LOW IDLE Rated speed rpm 300 8.50 rack travel mm Tolerance mm : + 0.10Del. quantity cm3/1000 strokes : 10.0 Tolerance cm3/1000 strokes : +-2.0 Check tolerance cm3/1000s. 4.5 Spreed Tolerance cm3/1000 strokes : 3.5

Check tolerance cm3/1000s. : 5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 03.03.95 Test oil : ISO 4113

Combination No. : 0402046827

Injection pump

Pump designation : PES6P12OA32ORS3284

EP type number : 0412026749

Governor

Governer design. : RQ275/1050PA999-3

Governer no. : 0421801598

Cust. part No. : CCEP5119A

Customer-spec. information

Customer : RVI

Motor : MIDR/PR 062045

Power KW : 186.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2417413071

Inlet press. bar : 2.5

Test nozzle holde

assembly : 1688901105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Lube oil : 1409918004

Test Lines : 1680750089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.55
Tolerance mm : + 0.05

test only : + 0.10

Rack travel in mm : 19.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.30

Check

tolerance °NW : + 0.75

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm : 10.35 Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes : 155.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +- 4.0

Spreed

Tolerance + cm3/1000 strokes : 5.0 +	Testing:
Check tolerance cm3/1000s. : 9.0	Rated speed rpm : 275 rack travel mm : -5.50 Tolerance mm : + 0.10
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	rack travel mm : -8.10 Rated speed rpm : 340 Tolerance 1/min : + 20
-	Rated speed rpm : 200
GUIDE SLEEVE POSITION	CRT mm max. : < -4.00
Rated speed rpm : 600	TORQUE CONTROL
Rack travel in mm: 20.00 Tolerance mm: + 0.80	Rated speed rpm : 1050 Tolerance mm : + 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP	
Rated speed rpm : 700 Aneroid pressure	ANEROID/ALTITUDE COMPENSATOR TEST
hPa : 1000 + Del. quantity cm3/1000 strokes : 155.0 +	SETTING
Tolerance cm3/1000 strokes : +- 1.0 Check tolerance	Rated speed rpm : 500 Pressure hPa : 1000
cm3/1000s. : + 4.0	MEASUREMENT
Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0	Pressure hPa : - Rated speed rpm : 500 rack travel mm : -2.20 Tolerance mm : + 0.10
	Rated speed rpm : 500
RATED SPEED	
rack travel mm : -1.00 Rated speed rpm : 1128 Tolerance 1/min : + 8	Pressure hPa : 360 rack travel mm : -0.40 Tolerance mm : +- 0.20
rack travel mm : -6.30 Rated speed rpm : 1205 Tolerance 1/min : + 15	Pressure hPa : 200 rack travel mm : −1.45 Tolerance mm : ← 0.05
rack travel mm : -9.85 Tolerance mm : + 0.55	START CUT-OUT
Tolerance mm : + 0.55 Rated speed rpm : 1350	Rated speed rpm : > 100 Check
LOW IDLE	speed 1/min :> 80 Rated speed rpm :< 195 Check
control lever position degree : 252.0 tolerance degree : + 4.0	speed 1/inin : < 215 FUEL DELIVERY CHARACTERISTICS
+	. Jes vestuni diminidi siladi 100

Aneroid pressure

1000 hPa 1050 Rated speed rpm

Del. quantity cm3/1000 strokes : 155.0

Tolerance

cm3/1000 strokes : +-3.0

Check tolerance

cm3/1000s. 6.0

Aneroid pressure

hPa 500 Rated speed rpm

Del. quantity cm3/1000 strokes : 81.0

Tolerance

cm3/1000 strokes 1.0

Check tolerance

cm3/1000s. 4.0

BREAKAWAY

Rack travel in mm: -1.00 Rated speed rpm : 1128 8 Tolerance 1/min : +-

STARTING FUEL DELIVERY

100 Rated speed rpm

Del. quantity

cm3/1000 strokes : 170.0

Tolerance

cm3/1000 strokes : + 15.0

Check tolerance

cm3/1000S.: + 19.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 03.03.95 Test oil : ISO 4113

Combination No. : 0402046830

Injection pump

Pump designation : PES6P120A320RS3290

EP type number : 0412026751

Governor

Governer design. : RQ275/950PA999-4

Governer no. : 0421801612

Cust. part No. : CCEP 5123A

Customer-spec. information

Customer : RVI

Motor

: MIDR/PR062045

Power KW

: 151.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C

40

Tolerance °C

Overflow valve : 2417413071

Inlet press. bar : Inlet press. bar : 2.5 Tolerance bar : + 0.1

2.5

Test nozzle holde

assembly

: 1688901105

Opening pressure

bar

: 208.5

Tolerance bar

: **←** 1.5

Lube oil

: 1409918004

Test lines : 1680750089

Outside diameter : 8.0

x inside diameter: 3.0

x length mm :

600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.25 Tolerance mm : + 0.05

test only : \leftarrow 0.10

Rack travel in mm: 19.50

Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

: **←** 0.30 Tolerance

Check

tolerance 'NW : +- 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 1

BASIC SETTING

Rated speed rpm :

500

Rack travel in mm: 12.85 Tolerance mm: + 0.05	Check tolerance cm3/1000S. : +- 4.0 Spreed Tolerance
Del. quantity cm3/1000 strokes : 142.0	cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0
Tolerance cm3/1000 strokes : + 1.0	
Check tolerance cm3/1000s. : + 4.0	RATED SPEED rack travel mm : -1.00
Spreed Tolerance	Rated speed rpm : 1018 Tolerance 1/min : + 8
cm3/1000 strokes : 5.0	rack travel mm : -8.80 Rated speed rpm : 1110
Check tolerance cm3/1000s. : 9.0	Tolerance 1/min : + 15 rack travel mm : -12.35
2nd speed rpm : 250	Tolerance mm : + 0.55 Rated speed rpm : 1250
Rack travel in mm : -7.80 + Tolerance mm : + 0.20 + Del. quantity	LOW IDLE
cm3/1000 strokes : 24.0 +	Testing:
cm3/1000 strokes : + 2.0 + Check tolerance cm3/1000s. : + 5.0 + Check tolerance cm3/1000s.	Rated speed rpm : 250 rack travel mm : -7.80
Spreed +	Tolerance mm : +- 0.10
cm3/1000 strokes : 8.0 + Check tolerance cm3/1000s. : 12.0 + Check tolerance cm3/1000s.	rack travel mm : -10.85 Rated speed rpm : 335 Tolerance 1/min : +- 20
‡	Rated speed rpm : 200
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	CRT mm max. : < -6.80
GUIDE SLEEVE POSITION	TORQUE CONTROL
Rated speed rpm : 600	Rated speed rpm : 950 Tolerance mm : + 0.10
Rack travel in mm : 20.00 Tolerance mm : + 0.80	Rated speed rpm : 500 rack travel mm : -4.00 Tolerance mm : + 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP	ANEROID/ALTITUDE
Rated speed rpm : 500 Aneroid pressure	COMPENSATOR TEST
hPa : 1000 + cm3/1000 strokes : 142.0 + cm3/1000 strokes : 142.0	SETTING
Tolerance cm3/1000 strokes : +- 1.0	Rated speed rpm : 500 Pressure hPa : 1000

MEASUREMENT

Pressure hPa	:	-
Rated speed rpm	:	500
rack travel mm	:	-1.90
Tolerance mm	: +	- 0.20

Rated speed rpm 500

Pressure hPa 320 -0.45rack travel mm Tolerance mm : + 0.15

Pressure hPa 160 rack travel mm -1.45: + 0.05Tolerance mm

START CUT-OUT

Rated speed rpm : > 100 Check speed 1/min : > 80 Rated speed rpm : < 195 Check speed 1/min : < 215

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

1000 hPa Rated speed rpm 950 Del. quantity cm3/1000 strokes : 158.0 Tolerance

cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. 6.0

Aneroid pressure

1000 Rated speed rpm 500 Del. quantity

cm3/1000 strokes : 79.0

Tolerance

cm3/1000 strokes : +-5.0

Check tolerance cm3/1000s.

8.0 : +-

Aneroid pressure

hPa Rated speed rpm 500

Del. quantity

cm3/1000 strokes : 104.0

Tolerance

cm3/1000 strokes : +-1.0

Check tolerance

cm3/1000s. 4.0

BREAKAWAY

Rack travel in mm: -1.00Rated speed rpm 1018 Tolerance 1/min

STARTING FUEL DELIVERY

Del. quantity

cm3/1000 strokes : 155.0

Tolerance

cm3/1000 strokes : +- 15.0

Check tolerance

cm3/1000s. : + 19.0

LOW IDLE

Rated speed rpm 250 7.80 rack travel mm Tolerance mm U.20 Del. quantity cm3/1000 strokes : 24.0 Tolerance cm3/1000 strokes Check tolerance cm3/1000s. 5.0 : +-Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 03.03.95 Test oil : ISO 4113

Combination No. : 0402646910

Injection pump

Pump designation : PE6P12OA32ORS7138

: -10

EP type number : 0412626922

Governor

Governer design. : RQV200...1100PA712

: -5

Governer no. : 0421813951

Cust. part No. : 1318823

Customer—spec. information Customer : SCANIA Motor : DSC908

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1417413025

Inlet press. bar : 2.5
Tolerance bar : + 0.1

Test nozzle holde

assembly : 1688901104

Opening pressure

bar : 251.5 Tolerance bar : + 1.5

Test lines : 1680750008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

Start-of-delivery setting with ROBO diaphragm.

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.45
Tolerance mm : + 0.05

test only : + 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.30

Check

tolerance *NW : +- 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm : 13.15 Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 180.0	Spreed Tolerance cm3/1000 strokes : 8.0
Tolerance cm3/1000 strokes : +- 1.0	Check tolerance
	cm3/1000s. : 12.0
Check tolerance cm3/1000s. : +- 4.0	RATED SPEED
Spreed Tolerance	control lever
cm3/1000 strokes : 8.0	position degree : 63.0 tolerance degree : + 4.0
Check tolerance cm3/1000s. : 12.0	control lever position degree : 118.0
2nd speed rpm : 250	tolerance degree : +- 4.0
Rack travel in mm: 5.30 Tolerance mm: + 0.30 Del. quantity	rack travel mm : 12.10 Rated speed rpm : 1145 Tolerance 1/min : +- 5
cm3/1000 strokes : 16.0	rack travel mm : 4.00
cm3/1000 strokes : +- 3.0	Rated speed rpm : 1305
Check tolerance + 6.0 +	Tolerance 1/min : + 15
Spreed + Tolerance +	rack travel mm : 0.50 Tolerance mm : +- 0.50
cm3/1000 strokes : 4.0 + Check tolerance	Rated speed rpm : 1400
cm3/1000s. : 8.0	100 700 5
‡	LOW IDLE
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	control lever
+	position degree : 64.0 tolerance degree : + 4.0
GUIDE SLEEVE POSITION	control lever
‡	position degree : 9.0 tolerance degree : +- 4.0
control lever + position degree : -1 +	Testing:
Rated speed rpm : 1130	Rated speed rpm : 250
Rack travel in mm: 16.50	rack travel mm : 4.60
Tolerance mm : +- 1.30	Tolerance mm : + 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 150
Rated speed rpm : 700	CRT mm min. :> 5.80
Aneroid pressure + + + + + + + + + + + + + + + + + + +	CONTINUOUS-ACTION CONTROL
Del. quantity cm3/1000 strokes : 180.0	Rated speed rpm : 250
Tolerance cm3/1000 strokes : + 1.0	TODOUE CONTROL
Check tolerance cm3/1000s. : + 4.0 +	TORQUE CONTROL

Rated speed rpm 700 13.15 rack travel mm Tolerance mm : + 0.05Rated speed rpm 1100 rack travel mm 13.15 Tolerance mm : + 0.05 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rom 500 Pressure hPa 1500 rack travel mm 13.15 Tolerance mm : +- 0.05 **MEASUREMENT** Pressure hPa Rated speed rpm 500 10.30 rack travel mm Tolerance mm 0.20 Rated speed rpm 500 480 Pressure hPa 12.35 rack travel mm Tolerance mm : +- 0.05 220 Pressure hPa 10.80 rack travel mm Tolerance mm : + 0.20 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa Rated speed rpm 1100 Del. quantity cm3/1000 strokes : 166.0 Tolerance cm3/1000 strokes : +-4.0 Check tolerance cm3/1000s. 6.0 Aneroid pressure 500 Rated speed rpm Del. quantity cm3/1000 strokes : 116.0 Tolerance cm3/1000 strokes : +-1.0 Check tolerance

BREAKAWAY

Rack travel in mm : 12.10
Rated speed rpm : 1145
Tolerance 1/min : + 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 10.30 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 130.0 Tolerance cm3/1000 strokes : + 20.0 Check tolerance cm3/1000s. : + 24.0

LOW IDLE

Rated speed rpm 250 rack travel mm 5.30 Tolerance mm 0.30 Del. quantity cm3/1000 strokes : 16.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s.8.0

cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 04.07.94 Test oil : ISO 4113

Combination No. : 0402646937

Injection pump

Pump designation : PE6P120A720RS7188

: -100

EP type number : 0412626925

Governor

Governer design. : RQV200...950PA725-7

Governer no. : 0421813803

Cust. part No. : 1333121

Customer—spec. information Customer : SCANIA Motor : DSC11 21

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40 Tolerance °C : + 2.0

Overflow valve : 1417413025

Inlet press. bar : 2.5
Tolerance bar : + 0.1

Test nozzle holde

assembly : 1688901104

Opening pressure

bar : 251.5 Tolerance bar : + 1.5

Test Lines : 1680750008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

Start-of-delivery setting with ROBO diaphragm.

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.45
Tolerance mm : + 0.05

test only : + U.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.30

Check

tolerance $^{\circ}NW$: + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm : 12.75 Tolerance mm : + 0.05

Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000s. : 12.0 Check tolerance cm3/1000s. : 12.0 Check tolerance cm3/1000s. : 12.0 Check tolerance cm3/1000s. : 12.0 Check tolerance cm3/1000s. : 12.0 Check tolerance cm3/1000s. : 12.0 Check tolerance cm3/1000s. : 12.0 Check tolerance mm : + 0.30 Del. quantity cm3/1000 strokes : 16.0 Tolerance mm : + 0.30 Del. quantity cm3/1000 strokes : 16.0 Tolerance may/1000 strokes : 16.0 Tolerance 1/min : + 5 Tolerance 1/min : + 15 Tolerance 1/min : + 15 Tolerance 1/min : + 15 Tolerance 1/min : + 15 Tolerance 1/min : + 0.50 Rated speed rpm : 1120 Control lever position degree : 4.0 Tolerance 1/min : + 15 Tolerance 1/min : + 0.50 Rated speed rpm : 1250 Control lever position degree : 10.0 Tolerance mm : + 0.50 Tolerance degree : - 1 Rated speed rpm : 1250 Control lever position degree : 4.0 Tolerance mm : + 0.50 Tolerance mm : + 0.50 Tolerance degree : - 1 Rated speed rpm : 1250 Rated speed rpm : 250 Tolerance mm : + 0.10 Rated speed rpm : 250 Tolerance mm : + 0.10 Rated speed rpm : 150 Rated speed rpm : 50 Tolerance mm : + 0.10 Rated speed rpm : 50 Tolerance mm : + 0.10 Rated speed rpm : 250 Tolerance mm : + 0.10 Rated speed rpm : 250 Tolerance mm : + 0.10 Rated speed rpm : 250 Tolerance mm : + 0.10 Rated speed rpm : 250 Tolerance mm : + 0.10 Rated speed rpm : 250 Tolerance mm : + 0.10 Rated speed rpm : 250 CONTINUOUS-ACTION CONTROL Rated speed rpm : 275 Tolerance mm : + 0.00 Tolerance mm : + 0.10 Tolera	Del. quantity cm3/1000 strokes : 220.0	Spreed Tolerance cm3/1000 strokes : 8.0
Spreed		Check tolerance
Tolerance cm3/1000 strokes : 8.0		RATED SPEED
cm3/1000S. : 12.0 control lever position degree : 60.0 tolerance degree : + 4.0 2nd speed rpm : 250 rack travel mm : 11.70 tolerance degree : + 4.0 Rack travel in mm:	Tolerance cm3/1000 strokes : 8.0	position degree : 112.0
2nd speed rpm : 250		
Tolerance mm	2nd speed rpm : 250	
cm3/1000 strokes : + 3.0 Rated speed rpm : 1120 Check tolerance cm3/1000s. : + 6.0 rack travel mm : 7.50 Tolerance cm3/1000 strokes : 4.0 rack travel mm : 1.50 Check tolerance cm3/1000s. : 8.0 Rated speed rpm : 1250 (B) SETTING OF INJECTION PUMP WITH GOVERNOR control lever position degree : 10.0 tolerance degree : + 4.0 GUIDE SLEEVE POSITION control lever position degree : 62.0 tolerance degree : + 4.0 control lever position degree : -1 Rated speed rpm : 1150 resting: Rack travel in mm : 9.50 rack travel im mm : 9.50 rack travel mm : 4.70 Tolerance mm : + 0.10 rack travel mm : 4.70 Tolerance mm : + 0.10 FULL LOAD DELIVERY AT FULL LOAD STOP Pared by a graph of the pressure has a control to c	Tolerance mm : + 0.30 + Del. quantity + cm3/1000 strokes : 16.0 +	Rated speed rpm : 995
Spreed Tolerance cm3/1000 strokes : 4.0 Rated speed rpm : 1250	cm3/1000 strokes : + 3.0 + Check tolerance +	Rated speed rpm : 1120
Cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION Control lever position degree : 4.0 control lever position degree : 62.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 1150 Rated speed rpm : 250 rack travel in mm : 9.50 Tolerance mm : + 2.50 Rated speed rpm : 150 Rated speed rpm : 150 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 220.0 Tolerance cm3/1000 strokes : 220.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance TORQUE CONTROL	Spreed Tolerance cm3/1000 strokes : 4.0	Tolerance mm : +- J.50
with Governor Guide Sleeve Position Guide Sleeve Position Guide Sleeve Position Guide Sleeve Position Control lever position degree : +4.0 Control lever position degree : 62.0 tolerance degree : +4.0 Control lever position degree : 62.0 tolerance degree : +4.0 Testing: Rated speed rpm : 250 Rack travel in mm : 9.50 Tolerance mm : +0.10 Rated speed rpm : 4.70 Tolerance mm : +0.10 Rated speed rpm : 150 CRT mm min. : > 6.00 Rated speed rpm : 275 Tolerance CONTINUOUS-ACTION CONTROL Rated speed rpm : 275 Tolerance Com3/1000 strokes : 220.0 Tolerance Torque Control lever position degree : 10.0 tolerance degree : +4.0 Control lever position degree : 4.0 Control lever position degr		LOW IDLE
control lever position degree : - 1 Rated speed rpm : 1150 Rack travel in mm : 9.50 Tolerance mm : + 2.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 220.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance Testing: Rated speed rpm : 250 rack travel mm : 4.70 Tolerance mm : + 0.10 Rated speed rpm : 150 CRT mm min. : > 6.00 Rated speed rpm : 275 TORQUE CONTROL		position degree : 10.0
position degree : - 1 Rated speed rpm : 1150 Rack travel in mm : 9.50 Tolerance mm : + 2.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPa : -	+	position degree : 62.0
Rack travel in mm: 9.50 Tolerance mm: + 2.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm: 700 Aneroid pressure hPa: - CONTINUOUS-ACTION CONTROL Del. quantity cm3/1000 strokes: 220.0 Tolerance cm3/1000 strokes: + 1.0 Check tolerance Torque travel mm: 4.70 Tolerance mm: + 0.10 Rated speed rpm: 150 CRT mm min. : > 6.00 Rated speed rpm: 275 Tolerance TORQUE CONTROL	position degree : -1	Rated speed rpm : 250
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPa : - CONTINUOUS-ACTION CONTROL Del. quantity cm3/1000 strokes : 220.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance TORQUE CONTROL		rack travel mm : 4.70
Rated speed rpm : 700 Aneroid pressure hPa : -	FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 150
hPa : - CONTINUOUS-ACTION CONTROL Del. quantity cm3/1000 strokes : 220.0 Rated speed rpm : 275 Tolerance cm3/1000 strokes : + 1.0 Check tolerance TORQUE CONTROL	Rated speed rpm : 700	CRT mm min. :> 6.00
cm3/1000 strokes : 220.0 Rated speed rpm : 275 Tolerance cm3/1000 strokes : + 1.0 Torque control	hPa : - +	CONTINUOUS-ACTION CONTROL
Check tolerance + TORQUE CONTROL	cm3/1000 strokes : 220.0 +	Rated speed rpm : 275
	Check tolerance	TORQUE CONTROL

Rated speed rpm rack travel mm Tolerance mm	: 950 : 12.75 : + 0.05
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1500 : 12.75 : + 0.05
MEASUREMENT	
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 500 : 10.40 : + 0.20
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 270 : 11.00 : + 0.15
Pressure hPa rack travel mm Tolerance mm	: 440 : 12.05 : + 0.05
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity	: - : 950
cm3/1000 strokes Tolerance	: 209.0
cm3/1000 strokes Check tolerance	: +- 4.0
cm3/1000s.	: +- 6.0
Aneroid pressure hPa Rated speed rpm	: - : 500
Del. quantity cm3/1000 strokes	: 153.0
Tolerance cm3/1000 strokes	: + 1.0
Check tolerance cm3/1000s.	: +- 4.0
BREAKAWAY	

Rack travel in mm : 11.70
Rated speed rpm : 995
Tolerance 1/min : + 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 10.40
Tolerance mm : + 0.20
Del. quantity
cm3/1000 strokes : 165.0
Tolerance
cm3/1000 strokes : + 15.0
Check tolerance
cm3/1000s. : + 19.0

LOW IDLE

Rated speed rpm rack travel mm Tolerance mm Del. quantity	: +-	250 4.70 9.30
cm3/1000 strokes	:	16.0
Tolerance cm3/1000 strokes	: +-	3.0
Check tolerance cm3/1000s.	: +-	6.0
Spreed Tolerance		
cm3/1000 strokes Check tolerance	:	4.8
cm3/1000s.	:	8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 01.03.95 Edition : ISO 4113 Test oil

Combination No. : 0402746647

Injection pump

Pump designation : PES6P120A720RS7366

EP type number : 0412726933

Governor

Governer design. : RQV275...1100PA1208K

Governer no. : 0421815459

Cust. part No. :

Customer-spec. information

Customer : IVECO-FRANCE : 8460.41.4000 Motor

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C : +- 2.0

Overflow valve : 1417413025

Inlet press. bar : Tolerance bar : \leftarrow 0.1

Overflow quantity

: 140 min. L/h Tolerance l/h: +- 20.0

Test nozzle holde

assembly : 1688901105

Opening pressure

208.5 bar Tolerance bar

Test Lines : 1680750089

Outside diameter: 8.0

x inside diameter: 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm 2.85 : +- 0.05 Tolerance mm

: + 0.10 test only

Rack travel in mm : 20.50Tolerance mm : + 0.50

: 1-5-3-6-2-Firing order

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.30

Check

tolerance °NW : +- 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 12.75

Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 273.0

Talanamaa	+	- Tolerance mm : +- 0.50
Tolerance cm3/1000 strokes	: +- 1.0	- GUIDE SLEEVE POSITION
Check tolerance cm3/1000s.	: + 4.0	- -
Spreed Tolerance cm3/1000 strokes	: 5.0	control lever position degree : - 1 Rated speed rpm : 1310
Check tolerance cm3/1000s.	: 9.0	- Rack travel in mm : 10.00 - Tolerance mm : +- 1.30
2nd speed rpm	: 275	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in m Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: + 0.20 : 23.0 : + 3.0 : + 6.0 : 8.0 : 12.0	Rated speed rpm : 1100 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 273.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 9.0
WITH GOVERNOR		RATED SPEED
GUIDE SLEEVE TRAV	/EL ‡	control lever position degree : 117.0
Rated speed rpm guide sleeve travel mm Tolerance mm	: 275 : 1.75 : + 0.20	tolerance degree : + 4.0 rack travel mm : 11.70 Rated speed rpm : 1145
, , , , , , , , , , , , , , , , , , , ,	, , ,	1113
Rated speed rpm	: 1155	Tolerance 1/min : + 5
Rated speed rpm guide sleeve travel mm Tolerance mm	: 1155 : 9.75 : + 0.15	Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1250 Tolerance 1/min : + 15
guide sleeve travel mm	: 9.75	rack travel mm : 4.00 Rated speed rpm : 1250
guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm	: 9.75 : + 0.15 : 791 : 6.42 : + 0.25 : 460 : 3.77	rack travel mm : 4.00 Rated speed rpm : 1250 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1350 LOW IDLE
guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	: 9.75 : + 0.15 : 791 : 6.42 : + 0.25 : 460	rack travel mm : 4.00 Rated speed rpm : 1250 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1350

		+ Rated speed rpm :> 170
Rated speed rpm	: 275	+ Check
rack travel mm	: 6.40	+ speed 1/min :> 150
Tolerance mm	: +- 0.10	+ Rated speed rpm : < 220
Rated speed rpm	: 100	+ Check + speed 1/min : < 240
CRT man min.	: > 7.90	
		FUEL DELIVERY CHARACTERISTICS
CONTINUOUS-ACTION	N CONTROL	Aneroid pressure
		+ hPa : 1200
Rated speed rpm	: 335	+ Rated speed rpm : 800
		+ Del. quantity + cm3/1000 strokes : 296.0
TORQUE CONTROL		Tolerance
		+ cm3/1000 strokes : + 3.0
Rated speed rpm	: 1100	+ Check tolerance
rack travel mm	: 12.75	+ cm3/1000s. : + 6.0
Tolerance mm	: + 0.05	Aneroid pressure
Rated speed rpm	: 800	hPa : 1200
rack travel mm	: 13.45	Rated speed rpm : 500
Tolerance mm	: + 0.10	+ Del. quantity
Pated speed spe	: 650	+ cm3/1000 strokes : 273.0 + Tolerance
Rated speed rpm rack travel mm	: 13.10	+ cm3/1000 strokes : + 3.0
Tolerance mm	: + 0.10	+ Check tolerance
		+ cm3/1000s. : $+$ 6.0
Rated speed rpm		
rack travel mm Tolerance mm	: 13.10 : +- 0.10	+ Aneroid pressure + hPa : -
10 cer di 100 mil		Rated speed rpm : 500
		+ Del. quantity
ANEROID/ALTITUDE		+ cm3/1000 strokes : 144.0
COMPENSATOR TEST		+ Tolerance + cm3/1000 strokes : + 1.0
		Check tolerance
SETTING		+ cm3/1000s. : $+$ 4.0
	200	+
Rated speed rpm Pressure hPa	: 800 : 1200	BREAKAWAY
rack travel mm	: 13.40	T DREAKAWA!
Tolerance mm	: ← 0.05	}
		+ Rack travel in mm : 11.70
MEASUREMENT		+ Rated speed rpm : 1145 + Tolerance 1/min : +- 5
Rated speed rpm	: 800	Totelance Milm : +- 3
, acca opeca , p		+
Pressure hPa	: 290	OTANTANO PUEL DEL TUENA
rack travel mm Tolerance mm	: 10.50 : + 0.20	STARTING FUEL DELIVERY
TOTAL MILE MILE	0.00	Rated speed rpm : 100
Pressure hPa	: 520	+ Del. quantity
rack travel mm	: 12.50	+ cm3/1000 strokes : 125.0
Tolerance mm	: + 0.05	+ Tolerance + cm3/1000 strokes : +- 15.0
		+ Check tolerance
START CUT-OUT		- cm3/1000s. : + 19.0
		 _

FOM IDE

Rated speed rpm rack travel mm Tolerance mm	:	+-	275 6.40 0.20
Del. quantity cm3/1000 strokes	:		23.0
Tolerance cm3/1000 strokes	:	+-	3.0
Check tolerance cm3/1000S. Spreed	:	+	6.0
Tolerance cm3/1000 strokes	:		8.0
Check tolerance cm3/1000s.	:		12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 03.03.95 : ISO 4113

Combination No. : 0402746909

Injection pump

Pump designation : PES6P120A320RS7236

EP type number

: 0412726848

Governor

Governer design. : RQV275...1000PA1001

: -1

Governer no.

: 0421813936

Cust. part No. : CCEP 5116A PROJ.171

Customer-spec. information

Customer : RVI

: MIDR 063540 J/3 Motor

Power KW

: 306.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C

Tolerance °C

2.0

Overflow valve

: 2417413071

Inlet press. bar : 2.5

Test nozzle holde

assembly

: 1688901105

Opening pressure

bar

208.5

Tolerance bar

: +- 1.5

Lube oil

: 1409918004

Test lines : 1680750089

Outside diameter : 8.0

x inside diameter :

3.0

x length mm :

600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar :

Tolerance bar : + 1.0

Prestroke mm 4.55

: +- J.05 Tolerance mm

test only : **←** 0.10

Rack travel in mm: 13.50

: +- 0.50 Tolerance mm

: 1-5-3-6-2-Firing order

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.30

Check

tolerance °NW : + 0.50

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 1

BASIC SETTING

Rated speed rpm : 600

Rack travel in mm : 13.80

Tolerance mm : + 0.05

	1	Otro de la la la com	
Del. quantity		Check tolerance cm3/1000s.	: +- 4.0
cm3/1000 strokes	: 310.0	Spreed	• • •••
	 +	Tolerance	
Tolerance	+	cm3/1000 strokes	: 5.0
cm3/1000 strokes	: ← 1.0 }	Check tolerance	0.0
Check tolerance		cm3/1000s.	: 9.0
cm3/1000s.	: + 4.0 I		
	1	RATED SPEED	
Spreed	+		
Tolerance	t		
cm3/1000 strokes	: 5.0	control lever	. 700.0
Check tolerance		position degree tolerance degree	: 302.0 : +- 4.0
cm3/1000s.	: 9.0	coterante degree	. 1" 4.0
- mar i desert	1	rack travel mm	: -1.00
2nd speed rpm	: 300	Rated speed rpm	: 1070
	+	Tolerance 1/min	: +- 5
Rack travel in mm		maal: Americal er	. 0.70
Tolerance mm Del. quantity	: + 0.20	rack travel mm Rated speed rpm	: -9 .70 : 1210
cm3/1000 strokes	: 31.0 I	Tolerance 1/min	
Tolerance	+	reservative rimiti	12
cm3/1000 strokes	: + 2.0	rack travel mm	: -13.25
Check tolerance	+	Tolerance mm	: ← 0.55
cm3/1000s.	: ← 5.0 +	Rated speed rpm	: 1750
Spreed Tolerance	Ī		
cm3/1000 strokes	: 8.0	LOW IDLE	
Check tolerance	}	3	
cm3/1000s.	: 12.0		
	+	control lever	244.2
(B) SETTING OF INJ	IECTTON PLIMP	position degree	
WITH GOVERNOR	T T	tolerance degree	. +- 4.0
MTILL GOAFINION	I	Testing:	
	1	· • • • · · · · · · · · · · · · · · · ·	
		Rated speed rpm	: 300
GUIDE SLEEVE POSIT	TION	rack travel mm	: -8.60
	†	Tolerance mm	: +- 0.10
control lever	Ī	Rated speed rpm	• 200
position degree	: - 1 I	nacea speed i pill	. 200
Rated speed rpm	: 1150	CRT mm max.	: < -7.20
•	+		
Rack travel in mm		COLUMN TABLES	CONTROL
Tolerance mm	: - 1.50	CONTINUOUS-ACTION	CONTROL
	I	Rated speed rpm	: 370
FULL LOAD DELIVERY	AT FULL LOAD STOP	nacea opeca i pili	. 515
	+		
	: 600	TORQUE CONTROL	
Aneroid pressure	+	Data d	4000
hPa	: 1000	Rated speed rpm	: 1000
Del. quantity cm3/1000 strokes	· 310 0 İ	Tolerance mm	: + 0.10
Tolerance	. Jio. 5	Rated speed rpm	: 500
cm3/1000 strokes	: +- 1.0	rack travel mm Tolerance mm	: -5.50
	+	Tolerance mm	: +- 0.10
	•		

		+	Spreed
ANEROID/ALTITUDE			Tolerance cm3/1000 strokes : 8.0
COMPENSATOR TEST		+	Check tolerance
		‡	cm3/1000s. : 12.0
SETTING		+	Aneroid pressure
Rated speed rpm	: 500	‡	hPa : – Rated speed rpm : 500
Pressure hPa	: 1000	+	Del. quantity
MEASUREMENT		‡	cm3/1000 strokes : 152.0 Tolerance
Pressure hPa		<u>†</u>	cm3/1000 strokes : +- 1.0 Check tolerance
Rated speed rpm		Ţ	cm3/1000s. : + 4.0
rack travel mm Tolerance mm	: -5.00 : +- 0.20	1	
		+	BREAKAWAY
Rated speed rpm	: 500	‡	
Pressure hPa	: 240	+	Rack travel in mm : -1.00
rack travel mm Tolerance mm	: -3.80 : +- 0.20	Ī	Rated speed rpm : 1070 Tolerance 1/min : +- 5
Pressure hPa	: 600	+	
rack travel mm	: -0.95	Ţ	
Tolerance mm	: + 0.05	<u>†</u>	STARTING FUEL DELIVERY
		 	Del. quantity
START CUT-OUT		‡	cm3/1000 strokes : 160.0 Tolerance
Rated speed rpm	: > 100	+	cm3/1000 strokes : +- 10.0
Check speed 1/min	: > 80	†	Check tolerance cm3/1000s. : +- 14.0
Rated speed rpm		+	
Check speed 1/min	: < 245	‡	
			LOW IDLE
FUEL DELIVERY CHA	ARACTERISTICS	Ŧ	
Aneroid pressure		1	Rated speed rpm : 300 rack travel mm : -8.60
hPa	: 1000	+	Tolerance mm : + 0.20
Rated speed rpm Del. quantity	: 1000	1	Del. quantity cm3/1000 strokes : 31.0
cm3/1000 strokes	: 287.0	+	Tolerance
Tolerance cm3/1000 strokes	: ← 3.0	Ī	cm3/1000 strokes : +- 2.0 Check tolerance
Check tolerance cm3/1000s.	: +- 6.0	†	cm3/1000s. : + 5.0 Spreed
	. 4- 0.0	Ŧ	Tolerance
Aneroid pressure hPa		<u>†</u>	cm3/1000 strokes : 8.0 Check tolerance
Rated speed rpm	500	Ţ	cm3/1000s. : 12.0
Del. quantity cm3/1000 strokes	: 138.0	1	
Tolerance		+	
cm3/1000 strokes Check tolerance	: +- 5.0	‡	
cm3/1000s.	: +- 8.0	+	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 03.03.95

Test oil

: ISO 4113

Combination No.

: 0402746931

Injection pump

Pump designation : PES6P120A320RS7236

EP type number

: 0412726848

Governor

Governer design. : RQV275...1000PA1001

: -2

Governer no.

: 0421813989

Cust. part No. : CCEP5128A 66-194

Customer-spec. information

Customer

: RVI

Motor

: MIDR 063540 N/3

Power KW

: 283.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C

40

: +--

Tolerance °C

2.0

Overflow valve

: 2417413071

Inlet press. bar :

2.5

Tolerance bar

0.1

Test nozzle holde

assembly

: 1688901105

Opening pressure

bar

208.5

Tolerance bar

: +- 1.5

Lube oil

: 1409918004

Test lines : 1680750089 Outside diameter : 8.0

x inside diameter :

3.0

x length mm

600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

4.55 Prestroke mm : + - 0.05Tolerance mm

test only : + 0.10

Rack travel in mm: 19.50 : +- 1.50 Tolerance mm

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.30

Check

tolerance °NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 1

BASIC SETTING

Rated speed rpm

600

Rack travel in mm: -7.25

J12

Tolerance mm	: ← 0.30	†
Del. quantity cm3/1000 strokes	: 74.0	GUIDE SLEEVE POSITION
Tolerance cm3/1000 strokes	: + 1.0	control lever
Check tolerance cm3/1000s.	: + 4.0	position degree : -1 Rated speed rpm : 1190
Spreed		+ Rack travel in mm: 13.20 + Tolerance mm: +- 1.30
Tolerance cm3/1000 strokes :	: 4.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance cm3/1000s.	: 7.0	Rated speed rpm : 600 Anergia pressure hPa : 1000
Rated speed rpm :	: 600	Del. quantity - cm3/1000 strokes : 290.0
Rack travel in mm : Tolerance mm :		Tolerance
Del. quantity cm3/1000 strokes :	290.0	Spreed Tolerance cm3/1000 strokes: 8.0
Tolerance cm3/1000 strokes :	+- 2.0	Check tolerance cm3/1000s. : 12.0
Check tolerance cm3/1000s. :	+ 5.0	RATED SPEED
Spreed Tolerance cm3/1000 strokes :	8.0	control lever position degree : 301.0 tolerance degree : + 4.0
Check tolerance cm3/1000s. :	12.0	rack travel mm : -1.00 Rated speed rpm : 1070
2nd speed rpm :	300	Tolerance 1/min : + 5
Del. quantity	+- 0.20	rack travel mm : -9.30 Rated speed rpm : 1205 Tolerance 1/min : +- 15
<pre>cm3/1000 strokes : Tolerance cm3/1000 strokes :</pre>		+ rack travel mm : -12.85 + Tolerance mm : +- 0.55
Check tolerance cm3/1000s. :	+ 5.0	Rated speed rpm : 1350
Spreed Tolerance cm3/1000 strokes :	6.0	LOW IDLE
Check tolerance cm3/1000s. :	10.0	control lever position degree : 247.0 tolerance degree : +- 4.0
(B) SETTING OF INJECTION OF THE WITH GOVERNOR	CTION PUMP -	Testing:

		1
Rated speed rpm	: 300	
rack travel mm	: -8.20	→ FUEL DELIVERY CHARACTERISTICS
Tolerance mm		+
5 1 1	200	+ Aneroid pressure
Rated speed rpm	: 200	† hPa : 1000
CRT mm max.	· / -4 9n	Rated speed rpm : 600 Del. quantity
CRE IIIII IIIQX.	. \ 3.00	= cm3/1000 strokes : 74.0
		Tolerance
CONTINUOUS-ACTION	N CONTROL	+ cm3/1000 strokes : + 1.0
		† Check tolerance
Rated speed rpm	: 365	+ cm3/1000s. : + 4.0
		Spreed
TORQUE CONTROL		Tolerance + cm3/1000 strokes : 4.0
TORGOE CONTROL		Check tolerance
Rated speed rpm	: 1000	cm3/1000s. : 7.0
Tolerance mm		+
		+ Aneroid pressure
Rated speed rpm	: 600_	† hPa : 1000
rack travel mm Tolerance mm	: -4.50	Rated speed rpm : 1000
iolerance mm	: +- 0.70	Del. quantity cm3/1000 strokes : 270.0
		Tolerance
ANEROID/ALTITUDE		cm3/1000 strokes : + 4.0
COMPENSATOR TEST		- Check tolerance
		+ cm3/1000s. : $+$ 7.0
		+
SETTING		Aneroid pressure
Rated speed rpm	• 500	+ hPa : 1000 + Rated speed rpm : 600
Pressure hPa		+ Del. quantity
r coodi c m d	, ,,,,,,	+ cm3/1000 strokes : 159.0
MEASUREMENT		+ Tolerance
		+ cm3/1000 strokes : +- 5.0
Pressure hPa	; -	+ Check tolerance
Rated speed rpm		+ cm3/1000s. : + 8.0
rack travel mm	: -3.80 : +- 0.30	+ Spreed
Tolerance mm	. + 0.50	+ Tolerance + cm3/1000 strokes : 8.0
Rated speed rpm	: 500	Check tolerance
, , , , , , , , , , , , , , , , , , , ,		+ cm3/1000s. : 12.0
Pressure hPa	: 240	+
rack travel mm	: -2.60	+ Aneroid pressure
Tolerance mm	: +- 0.20	+ hPa : -
Pressure hPa	: 480	Rated speed rpm : 500 Del. quantity
rack travel mm	: -0.75	cm3/1000 strokes : 167.0
Tolerance mm	: +- 0.05	+ Tolerance
		+ cm3/1000 strokes : +- 1.0
START CUT-OUT		+ cm3/1000s. : +- 4.0
Dated aread are	. \ 100	<u> </u>
Rated speed rpm Check	: > 100	BREAKAWAY
speed 1/min	: > 80	- ONEGINGRA!
Rated speed rpm	: < 195	+
Check		Rack travel in mm: -1.00
speed 1/min	: < 215	+ Rated speed rpm : 1070

Tolerance 1/min : + 5 STARTING FUEL DELIVERY

Del. quantity cm3/1000 strokes : 160.0

Tolerance

cm3/1000 strokes : + 10.0

Check tolerance

cm3/1000s. : + 14.0

LOW IDLE

cm3/1000s.

Rated speed rpm 300 -8.20 rack travel mm : + 0.20 Tolerance mm Del. quantity cm3/1000 strokes : 31.0 Tolerance cm3/1000 strokes : +-2.5 Check tolerance cm3/1000s. 5.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance

10.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 06.03.95 Test oil : ISO 4113

Combination No. : 0402746949

Injection pump

Pump designation : PES6P120A720RS7224

: -2

EP type number : 0412726893

Governor

Governer design. : RQV275...1100PA975

: -3K

Governer no. : 0421815350

Cust. part No. :

Customer-spec. information

: IVECO-FRANCE Customer : 8460.41.406 Motor

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C : +- 2.0

Overflow valve : 1417413076

Inlet press. bar : : + 0.1 Tolerance bar

Overflow quantity

min. L/h 140 : +- 20.0 Tolerance l/h

Test nozzle holde

: 1688901105 assembly

Opening pressure

208.5 bar Tolerance bar : +- 1.5 Test Lines : 1680750089

Outside diameter : 8.0

x inside diameter: 3.0

600 x Length mm

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm 5.15 : +- 7.05 Tolerance mm

test only : + 0.10

Rack travel in mm: 10.50 Tolerance mm : + 1.50

: 1-5-3-6-2-Firing order

: 0-60-120-180-240 Phasing

: -300

: + - 0.30Tolerance

Check

tolerance °NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm: 12.75

Tolerance mm : +- 0.05

Del. quantity + cm3/1000 strokes : 218.0 +	guide sleeve travel mm : 13.50 Tolerance mm : + 0.50
Tolerance cm3/1000 strokes : + 1.0	GUIDE SLEEVE POSITION
Check tolerance cm3/1000s. : +- 4.0	
Spreed	control lever position degree : - 1 Rated speed rpm : 1235
cm3/1000 strokes : 5.0 Check tolerance	Rack travel in mm : 10.30 Tolerance mm : + 2.50
cm3/1000s. : 9.0	Toterance min . 7- 2.30
2nd speed rpm : 275	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm: 5.30 Tolerance mm: + 0.20	Rated speed rpm : 1100 Aneroid pressure
Del. quantity cm3/1000 strokes : 30.0	hPa : 1200 Del. quantity cm3/1000 strokes : 218.0
cm3/1000 strokes : + 3.0 + Check tolerance +	Tolerance cm3/1000 strokes : +- 1.0
cm3/1000S. : + 6.0 + 500	Check tolerance cm3/1000s. : +- 4.0 Spreed
cm3/1000 strokes : 8.0 + Check tolerance +	Tolerance cm3/1000 strokes : 5.0
cm3/1000s. : 12.0	Check tolerance cm3/1000s. : 9.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	RATED SPEED
GUIDE SLEEVE TRAVEL	control lever
Rated speed rpm : 275 guide sleeve	position degree : 120.0 tolerance degree : + 4.0
travel mm : 1.90 + Tolerance mm : + 0.20 +	rack travel mm : 11.70 Rated speed rpm : 1160 _
Rated speed rpm : 1145 guide sleeve	Tolerance 1/min : + 5 rack travel mm : 4.00
travel mm : 10.40 Tolerance mm : +- 0.15	Rated speed rpm : 1245 Tolerance 1/min : + 15
Rated speed rpm : 750 guide sleeve	rack travel mm : 0.50 Tolerance mm : + 0.50
travel mm : 6.10 Tolerance mm : + 0.25	Rated speed rpm : 1350
Rated speed rpm : 430 guide sleeve	LOW IDLE
travel mm : 3.60 Tolerance mm : + 0.25	control lever
Rated speed rpm : 1360	position degree : 74.0 tolerance degree : +- 4.0

Testing:	
Rated speed rpm rack travel mm Tolerance mm	
Rated speed rpm	: 100
CRT mm min.	: > 7.00
CONTINUOUS-ACTIO	N CONTROL
Rated speed rpm	: 335
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	: 1100 : 12.75 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 900 : 12.75 : + 0.10
Rated speed rpm rack travel mm Tolerance mm	: 650 : 12.00 : + 0.10
Rated speed rpm rack travel mm Tolerance mm	
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 900 : 1200 : 12.75 : ← 0.05
MEASUREMENT	
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 900 : 7.40 : + 0.20
Rated speed rpm	: 900
Pressure hPa rack travel mm Tolerance mm	: 380 : 9.00 : +- 0.20

rack travel mm Tolerance mm	: 11.50 : + 0.05
START CUT-OUT	
Rated speed rpm Check	: > 170
speed 1/min Rated speed rpm Check	: > 150 : < 220
speed 1/min	: < 240
FUEL DELIVERY CHA	ARACTERISTICS
Aneroid pressure	: 1200
Rated speed rpm	: 7200
Del. quantity cm3/1000 strokes	: 231.0
Tolerance cm3/1000 strokes	: - 3.0
Check tolerance cm3/1000s.	: +- 6.0
Aneroid pressure hPa	: 1200
Rated speed rpm Del. quantity	: 650
cm3/1000 strokes Tolerance	: 238.0
cm3/1000 strokes Check tolerance	: + 3.0
cm3/1000s.	: +- 6.0
Aneroid pressure hPa	• -
Rated speed rpm Del. quantity	· : 650
cm3/1000 strokes Tolerance	: 124.0
cm3/1000 strokes Check tolerance	: +- 1.0
cm3/1000s.	: +- 4.0
BREAKAWAY	
Rack travel in mm	: 11.70
Rated speed rpm Tolerance 1/min	: 1160 : + 5
STARTING FUEL DEL	IVERY
Rated speed rpm	: 100

Pressure hPa : 710

Del. quantity cm3/1000 strokes : 140.0 Tolerance cm3/1000 strokes : +- 15.0 Check tolerance

cm3/1000s. : +- 19.0

LOW IDLE

Rated speed rpm 275 rack travel mm 5.30 : **←** 0.20 Tolerance mm Del. quantity cm3/1000 strokes : 30.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. : +-6.0 Spreed Tolerance 8.0 cm3/1000 strokes : Check tolerance cm3/1000s.12.0

Note remarks

Refer to Service Info for test and adjustment instructions.

See microcard(s) W400/...

Edition : 06.03.95 : ISO 4113 Test oil

Combination No. : 0402746950

Injection pump

Pump designation : PES6P12DA72ORS7224

: -2

EP type number : 0412726893

Governor

Governer design. : RQV275...1100PA975

: -4K

: 0421815351 Governer no.

Cust. part No.

Customer-spec. information

: IVECO-FRANCE Customer Motor : 8460.41.320

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C 40 Tolerance °C 2.0

Overflow valve : 1417413076

Inlet press. bar : Tolerance bar : + 0.1

Overflow quantity

min. L/h 140 Tolerance l/h : +- 20.0

Test nozzle holde

: 1688901105 assembly

Opening pressure

208.5 bar : + 1.5 Tolerance bar

Test Lines : 1680750089

Outside diameter : 8.0

3.0 x inside diameter :

x length mm 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm 5.15 Tolerance mm : +- 7.05

test only : + 0.10

Rack travel in mm: 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : + - 0.30

Check

tolerance °NW : + - 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm: 11.45

: +- 0.05 Tolerance mm

Del. quantity cm3/1000 strokes : 192.0	guide sleeve travel mm : 13.50 Tolerance mm : +- 0.50
Tolerance cm3/1000 strokes : + 1.0	GUIDE SLEEVE POSITION
Check tolerance cm3/1000s. : +- 4.0	control lever
Spreed Tolerance cm3/1000 strokes : 5.0	position degree : - 1 Rated speed rpm : 1235 Rack travel in mm : 10.30
Check tolerance cm3/1000s. : 9.0	Tolerance mm : +- 2.50
2nd speed rpm : 275	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm : 5.70 Tolerance mm : +- 0.20 Del. quantity	Rated speed rpm : 1100 Aneroid pressure hPa : 1200
<pre>cm3/1000 strokes : 30.0 Tolerance cm3/1000 strokes : + 3.0</pre>	Del. quantity cm3/1000 strokes : 192.0 Tolerance
Check tolerance cm3/1000s. : + 6.0	cm3/1000 strokes : + 1.0 Check tolerance
Spreed Tolerance	cm3/1000s. : + 4.0 Spreed
cm3/1000 strokes : 8.0 + Check tolerance cm3/1000s. : 12.0 + Check tolerance cm3/1000s.	Tolerance cm3/1000 strokes : 5.0 Check tolerance
	cm3/1000s. : 9.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	RATED SPEED
GUIDE SLEEVE TRAVEL	control lever
Rated speed rpm : 275 + guide sleeve +	position degree : 120.0 tolerance degree : +- 4.0
travel mm : 1.90 Tolerance mm : + 0.20	rack travel mm : 10.40 Rated speed rpm : 1170 Tolerance 1/min : +- 5
Rated speed rpm : 1145 guide sleeve	rack travel mm : 4.00
travel mm : 10.40 Tolerance mm : + 0.15	Rated speed rpm : 1240 Tolerance 1/min : +- 15
Rated speed rpm : 750 guide sleeve	rack travel mm : 0.50 Tolerance mm : + 0.50
travel mm : 6.10 Tolerance mm : + 0.25	Rated speed rpm : 1350
Rated speed rpm : 430 + guide sleeve +	LOW IDLE
travel mm : 3.60 Tolerance mm : + 0.25	control lever
Rated speed rpm : 1360	position degree : 73.0 tolerance degree : +- 4.0

Testina:

Rated speed rpm 275 5.70 rack travel mm Tolerance mm : + - 0.10

Rated speed rpm 100

CRT mm min. : > 7.20

CONTINUOUS-ACTION CONTROL

Rated speed rpm : 335

TORQUE CONTROL

1100 Rated speed rpm 11.45 rack travel mm Tolerance mm : +- 0.05

900 Rated speed rpm 11.10 rack travel mm Tolerance mm : + - 0.10

650 Rated speed rpm : 10.20 rack travel mm Tolerance mm : + 0.15

Rated speed rpm 400 rack travel mm 9.60 Tolerance mm : +- 0.20

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm 1100 Pressure hPa 1200 11.45 rack travel mm Tolerance mm : +- 0.05

MEASUREMENT

Pressure hPa Rated speed rpm 1100 7.80 rack travel mm : + - 0.20Tolerance mm

Rated speed rpm 1100

340 Pressure hPa 8.70 rack travel mm Tolerance mm : +- 0.20

Pressure hPa	•	570
rack travel mm	:	10.55
Tolerance mm	: +	- 0.05

START CUT-OUT

Rated speed rpm 170 : > Check speed 1/min : > 150 Rated speed rpm : < 220 Check speed 1/min : < 240

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa 1200 Rated speed rpm 900 Del. quantity

cm3/1000 strokes : 189.0

Tolerance

cm3/1000 strokes : +-3.0 Check tolerance

cm3/1000s. 6.0

Aneroid pressure

hPa 1200 Rated speed rpm 650 Del. quantity

cm3/1000 strokes :

185.0 Tolerance 3.0

cm3/1000 strokes Check tolerance

cm3/1000s. 6.0

Aneroid pressure

hPa Rated speed rpm 650

Del. quantity

cm3/1000 strokes : 127.0 Tolerance

cm3/1000 strokes : +-1.0

Check tolerance

cm3/1000s. : +-

BREAKAWAY

Rack travel in mm: 10.40 Rated speed rpm : 1170 Tolerance 1/min

STARTING FUEL DELIVERY

Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 140.0 Tolerance cm3/1000 strokes : + 15.0 Check tolerance cm3/1000s. : + 19.0

LOW IDLE

275 Rated speed rpm 5.70 rack travel mm Tolerance mm : **←** 0.20 Del. quantity cm3/1000 strokes : 30.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 07.03.95 Test oil : ISO 4113

Combination No. : 0403274005

Injection pump

Pump designation : PES4MW100/720RS1519

: -2

: 0413204017 EP type number

Governor

Governer design. : RSV350...1200MW0A356

Governer no. : 0420085231

Cust. part No. : 0250740802

Customer-spec. information : MB-NFZ Customer : 0M364LA Motor Power KW : 103.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 1419992198

Inlet press. bar : 1.5

Test nozzle holde

: 1688901101 assembly

Opening pressure

208.5 Tolerance bar

: 1680750089 Test lines

Outside diameter : 8.0 x inside diameter: 3.0 x length mm : 600

REMARKS

Set pneumatic shutoff device to control-rod stop = 0.5...1.5 mm control-rod travel at 4.5 bar atmospheric pressure.

Test hydr. locking device for starting with 800...1200 hPa air pressure.

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : + 1.0

Prestroke mm 4.55 Tolerance mm : + 0.05

test only : +- 0.10

Rack travel in mm: 21.00

Firing order : 1-3-4-2

Phasing : 0-90-180-270

Tolerance : ← 0.50

Check

tolerance °NW : +- 0.75

BASIC SETTING

Rated speed rpm 1200

Rack travel in mm: 13.90 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 126.0

Tolerance cm3/1000 strokes : +- 1.0	+ Check tolerance + cm3/1000s. : + 4.0 - Spreed
Check tolerance cm3/1000s. : +- 4.0	Tolerance cm3/1000 strokes : 5.0 Check tolerance
Spreed Tolerance	cm3/1000s. : 8.0
cm3/1000 strokes : 5.0	RATED SPEED
Check tolerance cm3/1000s. : 8.0	control lever
2nd speed rpm : 350	position degree : 108.0 tolerance degree : + 4.0
Rack travel in mm : 3.90	
	Total drawn 1 am 4 00
Tolerance mm : + 0.20	+ rack travel mm : 1.00
Del. quantity	+ Tolerance mm : + 0.70
cm3/1000 strokes : 12.0 Tolerance	Rated speed rpm : 1450
cm3/1000 strokes : +- 2.0	+ rack travel mm : 4.00
Check tolerance	+ Rated speed rpm : 1355
cm3/1000s. : +- 4.5	Matea Speed (pill : 1999
	Ť
Spreed	-
Tolerance	+ LOW IDLE
cm3/1000 strokes : 2.0	1
Check tolerance	+ Setting point w/out bum-ar spring
cm3/1000s. : 4.0	+
	+ Rated speed rpm : 350
	+ rack travel mm : 3.90
(D) OFFITING OF THEFTTAN DUMP	T rack travel limit : 3.90
(B) SETTING OF INJECTION PUMP	†
WITH GOVERNOR	Tantings
W-111 00 0-111011	+ Testing:
	resting:
	+
	Rated speed rpm : 100
	Rated speed rpm : 100
GUIDE SLEEVE POSITION	+
	Rated speed rpm : 100
	Rated speed rpm : 100
GUIDE SLEEVE POSITION	Rated speed rpm : 100 CRT mm min. :> 19.00
GUIDE SLEEVE POSITION control lever	Rated speed rpm : 100
GUIDE SLEEVE POSITION control lever position degree : - 3	Rated speed rpm : 100 CRT mm min. : > 19.00 TORQUE CONTROL
GUIDE SLEEVE POSITION control lever	Rated speed rpm : 100 CRT mm min. :> 19.00 TORQUE CONTROL Rated speed rpm : 1200
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800	Rated speed rpm : 100 CRT mm min. : > 19.00 TORQUE CONTROL
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800	Rated speed rpm : 100 CRT mm min. :> 19.00 TORQUE CONTROL Rated speed rpm : 1200 rack travel mm : 13.90
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50	Rated speed rpm : 100 CRT mm min. :> 19.00 TORQUE CONTROL Rated speed rpm : 1200
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800	Rated speed rpm : 100 CRT mm min. :> 19.00 TORQUE CONTROL Rated speed rpm : 1200 rack travel mm : 13.90 Tolerance mm : + 0.05
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20	Rated speed rpm : 100 CRT mm min. :> 19.00 TORQUE CONTROL Rated speed rpm : 1200 rack travel mm : 13.90 Tolerance mm : + 0.05 Rated speed rpm : 750
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring	Rated speed rpm : 100 CRT mm min. :> 19.00 TORQUE CONTROL Rated speed rpm : 1200 rack travel mm : 13.90 Tolerance mm : + 0.05 Rated speed rpm : 750 rack travel mm : 13.90
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20	Rated speed rpm : 100 CRT mm min. :> 19.00 TORQUE CONTROL Rated speed rpm : 1200 rack travel mm : 13.90 Tolerance mm : + 0.05 Rated speed rpm : 750
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension	Rated speed rpm : 100 CRT mm min. :> 19.00 TORQUE CONTROL Rated speed rpm : 1200 rack travel mm : 13.90 Tolerance mm : + 0.05 Rated speed rpm : 750 rack travel mm : 13.90
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring	Rated speed rpm : 100 CRT mm min. :> 19.00 TORQUE CONTROL Rated speed rpm : 1200 rack travel mm : 13.90 Tolerance mm : + 0.05 Rated speed rpm : 750 rack travel mm : 13.90
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension	Rated speed rpm : 100 CRT mm min. :> 19.00 TORQUE CONTROL Rated speed rpm : 1200 rack travel mm : 13.90 Tolerance mm : + 0.05 Rated speed rpm : 750 rack travel mm : 13.90 Tolerance mm : + 0.10
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.50	Rated speed rpm : 100 CRT mm min. :> 19.00 TORQUE CONTROL Rated speed rpm : 1200 rack travel mm : 13.90 Tolerance mm : 750 rack travel mm : 13.90 Tolerance mm : 13.90 Tolerance mm : 0.10
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension	Rated speed rpm : 100 CRT mm min. :> 19.00 TORQUE CONTROL Rated speed rpm : 1200 rack travel mm : 13.90 Tolerance mm : + 0.05 Rated speed rpm : 750 rack travel mm : 13.90 Tolerance mm : + 0.10
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.50	Rated speed rpm : 100 CRT mm min. :> 19.00 TORQUE CONTROL Rated speed rpm : 1200 rack travel mm : 13.90 Tolerance mm : 750 rack travel mm : 13.90 Tolerance mm : 13.90 Tolerance mm : 0.10
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.50 FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 100 CRT mm min. :> 19.00 TORQUE CONTROL Rated speed rpm : 1200 rack travel mm : 13.90 Tolerance mm : 750 rack travel mm : 13.90 Tolerance mm : 13.90 Tolerance mm : 0.10
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1200	Rated speed rpm : 100 CRT mm min. :> 19.00 TORQUE CONTROL Rated speed rpm : 1200 rack travel mm : 13.90 Tolerance mm : 750 rack travel mm : 13.90 Tolerance mm : 0.10 ANEROID/ALTITUDE COMPENSATOR TEST
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1200 Aneroid pressure	Rated speed rpm : 100 CRT mm min. :> 19.00 TORQUE CONTROL Rated speed rpm : 1200 rack travel mm : 13.90 Tolerance mm : 750 rack travel mm : 13.90 Tolerance mm : 13.90 Tolerance mm : 0.10
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1200 Aneroid pressure hPa : 1000	Rated speed rpm : 100 CRT mm min. :> 19.00 TORQUE CONTROL Rated speed rpm : 1200 rack travel mm : 13.90 Tolerance mm : + 0.05 Rated speed rpm : 750 rack travel mm : 13.90 Tolerance mm : + 0.10 ANEROID/ALTITUDE COMPENSATOR TEST
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1200 Aneroid pressure hPa : 1000	Rated speed rpm : 100 CRT mm min. :> 19.00 TORQUE CONTROL Rated speed rpm : 1200 rack travel mm : 13.90 Tolerance mm : + 0.05 Rated speed rpm : 750 rack travel mm : 13.90 Tolerance mm : + 0.10 ANEROID/ALTITUDE COMPENSATOR TEST
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1200 Aneroid pressure hPa : 1000 Del. quantity	Rated speed rpm : 100 CRT mm min. :> 19.00 TORQUE CONTROL Rated speed rpm : 1200 rack travel mm : 13.90 Tolerance mm : + 0.05 Rated speed rpm : 750 rack travel mm : 13.90 Tolerance mm : + 0.10 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 500
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1200 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 126.0	Rated speed rpm : 100 CRT mm min. :> 19.00 TORQUE CONTROL Rated speed rpm : 1200 rack travel mm : 13.90 Tolerance mm : + 0.05 Rated speed rpm : 750 rack travel mm : 13.90 Tolerance mm : + 0.10 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 500 Pressure hPa : 1000
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1200 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 126.0 Tolerance	Rated speed rpm : 100 CRT mm min. :> 19.00 TORQUE CONTROL Rated speed rpm : 1200 rack travel mm : 13.90 Tolerance mm : + 0.05 Rated speed rpm : 750 rack travel mm : 13.90 Tolerance mm : + 0.10 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 500 Pressure hPa : 1000 rack travel mm : 13.90
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1200 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 126.0	Rated speed rpm : 100 CRT mm min. :> 19.00 TORQUE CONTROL Rated speed rpm : 1200 rack travel mm : 13.90 Tolerance mm : + 0.05 Rated speed rpm : 750 rack travel mm : 13.90 Tolerance mm : + 0.10 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 500 Pressure hPa : 1000

MEASUREMENT

Pressure hPa	:		
Rated speed rpm	:		500
Tolerance mm	:	+	0.10

Rated speed rpm : 500

Pressure hPa	:	600
rack travel mm	:	2.00
Tolerance mm	: +	- 0.10

Pressure hPa	:	350
rack travel mm	:	0.50
Tolerance mm	: +	-0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid	pressure

hPa	:	10	000
Rated speed rpm	:	7	750
Del. quantity			
cm3/1000 strokes	:	•	124.0
Tolerance			
cm3/1000 strokes	:	+-	2.0
Check tolerance			
cm3/1000s.	: .	+	5.0
Spreed			
Tolerance			
cm3/1000 strokes	:		6.0
Check tolerance			
cm3/1000s.	:		9.0

Aneroid pressure		
hPa	:	-
Rated speed rpm	:	500
Del. quantity		
cm3/1000 strokes	:	67.0
Tolerance		
cm3/1000 strokes	: +	- 1.0
Check tolerance		
cm3/1000s	• 4	— პ ი

STARTING FUEL DELIVERY

Rated speed rpm	:	100
Del. quantity cm3/1000 strokes	:	150.0
Tolerance cm3/1000 strokes	: +-	5.0
Check tolerance cm3/1000s.	: +	8.0

LOW IDLE

Rated speed rpm	:		350
rack travel mm	:		3.90
Tolerance mm	:	+-	0.20
Del. quantity			
cm3/1000 strokes	:		12.0
Tolerance			
cm3/1000 strokes	:	+-	2.0
Check tolerance			
cm3/1000s.	:	+	4.5
Spreed			
Tolerance			
cm3/1000 strokes	:		2.0
Check tolerance			
cm3/1000s.	:		4.0

Note inst. in remarks column

Test scheet : VMA 1,7 A Edition : 18.02.91

replaces : -

Calibrating oil : ISO-4113

Injection pump : VE3/10F2100L353 Type number : 0 460 403 013

Customer Part-No. :

Customer-specific information

Customer : VM

Engine : HR 392 SHJ

TEST BENCH REQUIREMENTS

Calibrating-oil return>temp. > °C

with>thermometer> : 40.00...48.00 Electronically> : 42.00...50.00

Inlet press., bar : 0.30...0.40

Calibrating nozzle-holder

assembly> : 1 688 901 000

Opening

Pressure> bar: 147.00...150.00

Outside diameter : 6.00 x Wall>thickness : 2.00 x Length> mm: 840

Start of delivery

Prestroke mm: 0,4

> (from BDC): 0,02(0,04)

Injection—pump setting values Test specifications in parentheses

Timing-device travel

Speed 1/min: 1000 Charge press. hPa: 1000

Setting value mm: 2.10...2.50

Shutoff

electromagnet>Volt: 12

Supply-pump pressure

Speed 1/min: 1000

Setting value bar: 4.20...4.80

Shutoff

electromagnet>Volt: 12

Full-load del. with charge press.:

Speed 1/min: 1500 Charge press. hPa: 1000

Del. quantity cm3/

> 1000s.: 65.00...66.00

Shutoff

electromagnet>Volt: 12 Dispersion cm3/: 3.0 > 1000s.: (3.0)

Full-load del. w/out charge press.:

Speed 1/min: 750

Del. quantity cm3/

> 1000s.: 46.10...47.10

Shutoff

electromagnet>Volt: 12

Low-idle speed regulation

Speed 1/min: 460

Del. quantity cm3/

> **1000**s.: 8.50...12.50

Shutoff

electromagnet>Volt: 12 Del. quantity cm3/: 3.0 > 1000s.: (3.0)

Full-load speed regulation

Speed 1/min: 2300 Charge press hPa: 1000

Del. quantity cm3/

> 1000s.: 34.00...40.00

Start:

Speed 1/min: 100

Del. quantity cm3/: 35.00...61.00

mind> 1000s.: 35.00

Shutoff

electromagnet>Volt: 12

Load-dependent start of delivery:

Inj.-qty.dif.measurement:

Speed 1/min: 1500 Charge press hPa: 1000

Inj.-qty. cm3/

difference> 1000S.: 10.00...12.00

Shutoff

electromagnet>Volt: 12 TD-travel dif.measurement

1.Speed 1/min: 1500 Charge press hPa: 1000

TD-travel

difference> mm: Shutoff	0.300.50	†	Shutoff electromagnet>Volt:	12
electromagnet>Volt:	: 12	1	cectionagnet voce.	16
SP press.—dif.measu		‡	Overlow quantity at	overflow valve:
1.Speed 1/min:		+	1st speed 1/min:	600
Charge press hPa:	1000	+	Shutoff	
Supply pump		+	electromagnet>Volt:	
pressure>		+	Overflow :	
difference> bar:	0.100.30	+	quantity> cm3/10s:	
Shutoff		+	2nd speed 1/min:	2100
electromagnet Volt:	12	+	Charge press. hPa:	1000
Tunnantina ayan ta		+	Shutoff	40
Inspection-pump tes		T	electromagnet>Volt:	12
Test specifications	: in parentheses	+	Overflow :	
Timing do		+	quantity> cm3/10s:	(40.60154.00)
Timing-device chara	icteristic:	Ť	Doldson, and	hmaaliaiini, ahan a
2nd speed 1/min:	2400	T	Delivery—quant. and	preakaway char.:
		T		
Charge press hPa:		T	And annual Alasa.	700,
	6.106.90	†	1nd speed 1/min:	
	(5.807.20)	+	Charge-air pressure-	
Shutoff	42	+	point> hPa:	
electromagnet>Volt:		+	LDA-stroke mm:	6.2
3rd speed 1/min:		+	Shutoff	40
Charge press hPa:	1000	+	electromagnet>Volt:	
TD travel mm:	2.102.50	+	Del. quantity cm3/:	
> mm:	(1.603.00)	+		(53.5058.50)
Shutoff	4.0	+	3rd speed 1/min:	
electromagnet>Volt:		+	Charge press. hPa:	1000
5th speed 1/min:		+	Shutoff	
Charge press. hPa:		+	electromagnet>Volt:	
TD travel mm:	5.406.20	+	Del. quantity cm3/:	
	(5.106.50)	+	> 1000s.:	
Shutoff		+	5th speed 1/min:	
<pre>electromagnet>Volt:</pre>		+	Charge press. hPa:	1000
6th speed 1/min:		+	Shutoff	
Charge press. hPa:		+	electromagnet>Volt:	
	3.904.70	+	Del. quantity cm3/:	
	(3.605.00)	+	> 1000s.:	
Shutoff		+	9th speed 1/min:	
electromagnet>Volt:	12	+	Charge press. hPa:	1000
		+	Shutoff	4-
Supply-pump pressure	e characteristic:	+	electromagnet>Volt:	
	0400	†	Del. quantity cm3/:	
1st speed 1/min:		†		(54.2058.80)
	1000	†	11th speed 1/min:	
Supply-pump		+	Charge press. hPa:	1000
•	7.908.50	+	Shutoff	4.0
Shutoff	•	+	electromagnet>Volt:	
electromagnet>Volt:		+	Del. quantity cm3/:	
2nd speed 1/min:		+		(59.5064.50)
Charge press. hPa:	1000	†	12th speed 1/min:	
Supply-pump .		†	Charge press. hPa:	1000
	4.204.80	+	Shutoff	
Shutoff		+	electromagnet>Volt:	
electromagnet>Volt:		+	Del. quantity cm3/:	
3rd speed 1/min:	600	+		(63.5067.50)
Supply-pump		+	18th speed 1/min:	750
nreccures here	230 290	1	Shutoff	

electromagnet>Volt: Del. quantity cm3/:	: 46.1047.10	‡	Shutoff electromagnet>Volt: 1	2
20th speed 1/min:	: (44.1049.10) : 600	†	SP press.—dif.measure	
Shutoff		+	pompa di mandata (FP)	:
electromagnet>Volt:	: 12	+	1st speed 1/min: -	
Del. quantity cm3/:	42.0044.00	+	2nd speed 1/min: 1	500
	(40.0046.00)	+	Charge press. hPa: 1	
		1	Supply pump-	
		1		.100.30
		T		
Floren divisions		Ť		0.100.30)
Electr. shutoff:		†	Shutoff	_
		+	electromagnet>Volt: 1	2
ist speed 1/min:		+		
Del. quantity cm3/:	0.003.00	+	Automatic starting fu	el delivery:
	(0.003.00)	+	3	
, , , , , , , , , , , , , , , , , , , ,		1	1st speed 1/min: 3	50
Idle delivery:		1	Shutoff	50
idle delivery.		T		2
	4.45	+	electromagnet>Volt: 12	
1st speed 1/min:	460	+	Del. quantity cm3/: 42	
Shutoff		+	> 1000s.: (4	42.0068.00)
electromagnet>Volt:	12	+		
Del. quantity cm3/:	8.5012.50	1	4th speed 1/min: 10	n n
	(6.5014.50)	1	Shutoff	
Dispersion cm3/:		1	electromagnet>Volt: 12	2
> 1000s.:		T		
		T	Del. quantity cm3/: 35	
2nd speed 1/min:	500	+	> 1000s.: (3	35 1061.00)
Shutoff		+		
electromagnet>Volt:	12	+	Shutoff electromagnet:	•
Del. quantity cm3/:	4.0010.00	+	•	
	(2.0012.00)	+	Cut-in	
3rd speed 1/min:		1	>min voltage : 10	ገ.በ
Shutoff		1	Rated voltage : 12	
electromagnet>Volt:	12	T	Nated Voltage . 12	2,0
Dol guardide and /	0.00 7.00	T	Marmhan and assembly	48
Del. quantity cm3/:	(0.007.00	T	Mounting and assembly	aimensions:
> 1000s.:	(0.007.00)	+		
		4	Designation	
Load-dependent star		+	K mm: -	
Injqty.dif.measur	ement:	+	KF mm: 5,	,66,0
		+	MS mm: 0,	,61,0
2nd speed 1/min:	1500	+	SVS max. mm: 0,	
Charge press. hPa:		1	LDA stroke mm: 6,	
	10.0012.00	1		
difference> 1000S.:		1	Remarks:	
Shutoff	(10.0012.00)	T	ivellial ks.	10
	40	T	. 50	12. 3 (6.5014.50)
electromagnet Volt:		†	: 50	3 (0.5014.50) 3
4th speed 1/min:		+		
Charge press. hPa:		+		
	15.0021.00	+		
difference> 1000S.:	(15.0021.00)	+		
Shutoff		+		
electromagnet>Volt:	12	+		
cood, amaginos, roco.	· -	1		
TD-travel dif.measu	rement.	1		
		Ŧ		
correttore anticipo		T		
1st speed 1/min:		Ť		
2nd speed 1/min:		+		
Charge press. hPa:	1000	+		
TD-travel :	0.300.50	+		
	(0.300.50)	÷		
		-		

Note inst. in remarks column

Test scheet : CAS 2,5 D Edition : 18.02.91

replaces : -

Calibrating oil : ISO-4113

Injection pump : VE3/10F1100R276-3
Type number : 0 460 403 014

Customer Part-No. : 1 967 077 C1

Customer-specific information

Customer : CASE

Engine : 0155/440

TEST BENCH REQUIREMENTS

Calibrating—oil return>temp. > °C

with>thermometer> : 40.00...48.00 Electronically> : 42.00...50.00

Inlet press., bar: 0.30...0.40

Calibrating nozzle-holder

assembly> : 1 688 901 020

Opening

Pressure> bar: 172.00...175.00

Perforated-plate

diameter> mm: 0.6

Test inj. tubing : 1 688 750 017

Outside diameter : 6.00 x Wall>thickness : 2.00 x Length> mm: 840

Start of delivery

Prestroke mm:
> (from BDC): -

Start of delivery block Piston stroke mm: 1,0

> mm: 0,98...1,02

Outlet > : A

Injection-pump setting values
Test specifications in parentheses

Timing-device travel

Speed 1/min: 800

Setting value mm: 2.20...2.60

Supply-pump pressure

Speed 1/min: 800

Setting value bar: 4.00...4.60

Full-load del. w/out charge press.:

Speed 1/min: 800

Del. quantity cm3/

> 1000s.: 61.00...62.00

Dispersion cm3/: 2,5 > 1000s.: (3.5)

Low-idle speed regulation

Speed 1/min: 350

Del. quantity cm3/

> 1000s.: 13.00...17.00

Full-load speed regulation

Speed 1/min: 1150

Del. quantity cm3/

> 1000s.: 41.J...47.00

Start:

Speed 1/min: 100

Del. quantity cm3/: 75.00...125.00

mind> 1000s.: 75.00

Inspection-pump test specifications Test specifications in parentheses

Timing-device characteristic:

2nd speed 1/min: 1050

TD travel mm: 3.30...4.10

> imm: (3.00...4.40) 3rd speed 1/min: 800

TD travel mm: 1.90...2.30

> mm: (1.40...2.80)

4th speed 1/min: 600

TD travel mm: 0.30...1.10

> mm: (0.00...1.40)

Supply-pump pressure characteristic:

1st speed 1/min: 500

Supply-pump

pressure> bar: 2.90...3.50

2nd speed 1/min: 800

Supply-pump

pressure> bar: 4.00...4.60

3rd speed 1/min: 1050

Supply-pump

bar: 4.80...5.40 pressure> Overlow quantity at overflow valve: 1/min: 500 1st speed Overflow : 41.70...83.40 cm3/10s: (26.70...98.40) auantity> 1/min: 1050 2nd speed Overflow : 55.60...139.00 cm3/10s: (40.60...154.00) quantity> Delivery quant. and breakaway char .: 1/min: 1250 2nd speed Del. quantity cm3/: 0.00...3.00 1000s.: (0.00...3.00) 1/min: 1230 3rd speed Del. quantity cm3/: 0.00...10.00 1000s.: (0.00...10.00) 1/min: 1180 4th speed Del. quantity cm3/: 10.00...40.00 1000s.: (10.00...40.00) 1/min: 1150 5th speed Del. quantity cm3/: 41.00...47.00 1000s.: (39.50...48.50) 9th speed 1/min: 1050 Del. quantity cm3/: 60.50...63.50 1000s.: (59.50...64.50) 1/min: 800 12th speed Del. quantity cm3/: 61.00...62.00 1000s.: (59.20...63.80) 20th speed 1/min: 500 Del. quantity cm3/: 57.00...61.00 1000s.: (56.00...62.00) Mech. shutoff: 1/min: 1050 1st speed Del. quantity cm3/: 0.00...3.00 1000s.: (0.00...3.00) Idle delivery: 1st speed 1/min: 350 Del. quantity cm3/: 13.00...17.00 1000s.: (11.00...19.00) cm3/: 2.5 Dispersion 1000s.: (3.5) 2nd speed 1/min: 450 Del. quantity cm3/: 0.00...4.00 1000s.: (0.00...4.00) Automatic starting fuel delivery: 1st speed 1/min: 300 Del. quantity cm3/: 80.00...110.00 1000s.: (80.00...110.00)

2nd speed 1/min: 400 Del. quantity cm3/: 60.00...80.00 1000s.: (60.00...80.00) 4th speed 1/min: 100 Del. quantity cm3/: 75.00...125.00 1000s.: (75.00...125.00) Mounting and assembly dimensions: Designation K mm: 3,2...3,4 KF mm: 5,1...5,3 MS mm: 1,1...1,5 SVS max. mm: 4,9 Remarks: : .00(11.00...19.00)2.

Note inst. in remarks column

Test scheet : VMA

Edition : 03.12.92

replaces : -

Calibrating oil : ISO-4113

Injection pump : VE3/10F1500L483 Type number : 0 460 403 016

Customer Part-No. :

Customer-specific information

Customer : VM

Engine : HR 394 H

Power KW: 39

TEST BENCH REQUIREMENTS

Overflow restricti: 1 463 456 303

Calibrating-oil

return>temp. > °C

with>thermometer> : 40.00...48.00 Electronically> : 42.00...50.00

Inlet press., bar : 0.30...0.40

Calibrating nozzle-holder

assembly> : 1 688 901 022

Opening |

Pressure> bar: 127.00...133.00

Test inj. tubing : 1 680 750 073

Outside diameter : 6.00

x Wall>thickness : 2.00

x Length> mm: 450

Start of delivery

Prestroke mm: -

> (from BDC): -

Injection-pump setting values
Test specifications in parentheses

Timing-device travel

Speed 1/min: 1200

Setting value mm: 2.50...2.90

Shutoff

electromagnet>Volt: 12

Supply-pump pressure

Speed 1/min: 1200

Setting value bar: 5.30...5.90

Shutoff

electromagnet>Volt: 12

Full-load del. with charge press.:

Dispersion cm3/: 3.5

> 1000s.: (3.5)

Full-load del. w/out charge press.:

Speed 1/min: 1200

Del. quantity cm3/

> 1000s.: 44.00...45.00

Shutoff

electromagnet>Volt: 12.0 Dispersion cm3/: 3.5 > 1000s.: (3.5)

Low-idle speed regulation

Speed 1/min: 460

Del. quantity cm3/

> 1000s.: 10.50...14.50

Shutoff

electromagnet>Volt: 12 Del. quantity cm3/: 3.5 > 1000s.: (3.5)

Full-load speed regulation

Speed 1/min: 1620

Del. quantity_cm3/

> 1000s.: 21.00...27.00

Shutoff

electromagnet>Volt: 12

Start:

Speed 1/min: 100

Del. quantity cm3/: 60.00...100.00

mind> 1000s.: 60.00

Shutoff

electromagnet>Volt: 12

Load-dependent start of delivery:

Inj.-qty.dif.measurement:

Speed 1/min: 1200

Inj.-qty. cm3/

difference> 1000s.: 15.00...17.00 #

Shutoff

electromagnet>Volt: 12 SP press.-dif.measurement

1.Speed 1/min: 1200

Supply pump

pressure>		+	2nd speed 1/min:	1700
<pre>difference> bar: Shutoff</pre>	0.100.30 #	†	Shutoff	10
electromagnet Volt:	12.0	I	<pre>electromagnet Volt: Del. quantity cm3/:</pre>	
ottott omag jot tott		1		(0.003.00)
Inspection-pump tes		+	5th speed 1/min:	
Test specifications	in parentheses	+	Shutoff	N (
Timina davidas abana		†	electromagnet>Volt:	12
Timing-device chara	icteristic:	İ	Del. quantity cm3/:	(18.0030.00)
2nd speed 1/min:	1500	I	8th speed 1/min:	
	3.604.40	+	Shutoff	,,,,,
	(3.304.70)	+	electromagnet>Volt:	
Shutoff	42	†	Del. quantity cm3/:	
electromagnet>Volt: 3rd speed 1/min:		†		(36.0048.00)
TD travel mm:	2.502.96	I	9th speed 1/min: Shutoff	1300
> mm:	(2.003.40)	1	electromagnet>Volt:	12
Shutoff		+	Del. quantity cm3/:	
electromagnet>Volt:		+		(42.0048.00)
4th speed 1/min:		+	12th speed 1/min:	1200
	1.302.10 (1.002.40)	İ	Shutoff electromagnet>Volt:	49
Shutoff	(1.002.40)	I	Del. quantity cm3/:	
electromagnet>Volt:	12	+	> 1000s.:	(42.0047.00)
_		+	20th speed 1/min:	
Supply-pump pressur	e characteristic:	+	Shutoff	4.0
2nd speed 1/min:	400	†	electromagnet>Volt:	
2nd speed 1/min: Supply-pump	800	I	Del. quantity cm3/:	(44.0050.00)
	2.803.40	1	1000011	(++.00)
Shutoff		+		
electromagnet>Volt:		+	F1 . 1 . cc	
3rd speed 1/min: Supply-pump	1200	Ī	Electr. shutoff:	
	5.305.90	1	1st speed 1/min:	400
Shutoff		+	Del. quantity cm3/:	
electromagnet>Volt:		+		(0.003.00)
4th speed 1/min:	1500	†	Shutoff	
Supply-pump pressure> bar:	6.607.20	Ī	electromagnet>volt:	_
Shutoff	0.00	1	Idle delivery:	
electromagnet>Volt:	12	+	·	
.		+	1st speed 1/min:	460
Overlow quantity at	overtlow valve:	İ	Shutoff electromagnet>Volt:	12
1st speed 1/min:	600	I	Del. quantity cm3/:	10.5014.50
Shutoff		+		(8.5016.50)
electromagnet>Volt:		+	Dispersion cm3/:	
	41.7083.40	+	> 1000s.:	
quantity> cm3/10s:		†	2nd speed 1/min:	650
2nd speed 1/min: Shutoff	1,000	I	Shutoff electromagnet>Volt:	12
electromagnet>Volt:	12	+	Del. quantity cm3/:	
Overflow :	55.50138.80	+	> 1000s.:	(0.003.00)
quantity> cm3/10s:	(40.50153.80)	+	3rd speed 1/min:	550
Delivery-quant. and	breakauay chan	I	Shutoff electromagnet>Volt:	12
verivery quarter and	Dicaraway Char.,	I	Del. quantity cm3/:	
		+		(1.009.00)

```
Load-dependent start of delivery:
Ini.-aty.dif.measurement:
1st speed
             1/min: 1200
Inj.-qty. cm3/ : 18.0...26.0 '
difference> 1000s.: -
Shutoff
electromagnet>Volt: 12
TD-travel dif.measurement:
correttore anticipo iniezione (SV):
              1/min: 1200
1st speed
                  : 0.80...1.00 '
TD-travel
difference>
                 mm: -
Shutoff
electromagnet>Volt: 12
Automatic starting fuel delivery:
              1/min: 200
1st speed
Shutoff
electromagnet>Volt: 12
Del. quantity cm3/: 65.00...95.00
             1000s.: (65.00...95.00)
             1/min: 500
2nd speed
Shutoff
electromagnet>Volt: 12
Del. quantity cm3/: 35.00...55.00
> 1000s.: (35.00...55.00)
             1/min: 100
4th speed
Shutoff
electromagnet>Volt: 12
Del. quantity cm3/: 60.00...100.00
             1000s.: (60.00...100.00)
Shutoff electromagnet:
Cut-in
>min voltage
                  : 10.0
Rated voltage
                  : 12.0
Mounting and assembly dimensions:
Designation
K
                mm: 3.2...3.4
KF
                mm: 5.8...6.2
MS
                mm: 0.6...1.0
SVS max.
                mm: 2.8
                mm: 38.2 + -2
Ya
                mm: 55.5 + -4.1
Yb
Remarks:
                                    ...14
                  : .50(8.50...16.50) 3.
```

Note inst. in remarks column

Test scheet : VMA

Edition : 09.07.92 Calibrating oil : ISO-4113

Injection pump : VE3/10F1600L483 Type number : 0 460 403 016

Customer Part-No. :

Customer-specific information

Customer : VM

Engine : HR 394 H

Power KW: 39

TEST BENCH REQUIREMENTS

Overflow restricti: 1 463 456 303

Calibrating-oil return>temp. > °C

with>thermometer> : 40...48 Electronically> : 42...50

Inlet press., bar : 0.30...0.40

Calibrating nozzle-holder

assembly> : 1 688 901 022

Opening

Pressure> bar: 130.00...133.00

Test inj. tubing : 1 680 750 073

Outside diameter : 6.00 x Wall>thickness : 2.00 x Length> mm: 450

Injection-pump setting values
Test specifications in parentheses

Timing-device travel

Speed 1/min: 1200

Setting value mm: 2.50...2.90

Shutoff

electromagnet>Volt: 12

Supply-pump pressure

Speed 1/min: 1200

Setting value bar: 5.30...5.90

Shutoff

electromagnet>Volt: 12

Full-load del. with charge press.:

Speed 1/min: 1200

Del. quantity cm3/

> 1000s.: 45.50...46.50

Shutoff

electromagnet>Volt: 12 Dispersion cm3/: 3.5 > 1000s.: (3.5)

Low-idle speed regulation

Speed 1/min: 400

Del. quantity cm3/

> 1000s.: 10.50...14.50

Shutoff

electromagnet>Volt: 12 Del. quantity cm3/: 3.5 > 1000s.: (3.5)

Full-load speed regulation

Speed 1/min: 1620

Del. quantity cm3/

1000s.: 21.℃...27.00

Shutoff

electromagnet>Volt: 12

Start:

Speed 1/min: 100

Del. quantity cm3/: 60.00...100.00

mind> 1000s.: 60.00

Shutoff

electromagnet>Volt: 12

Load-dependent start of delivery:

Inj.-qty.dif.measurement:

Speed 1/min: 1209 Charge press hPa: 12

Inj.-qty. cm3/

difference> 1000s.: -18.00...26.00*

Shutoff

electromagnet>Volt: 12 TD-travel dif.measurement

1.Speed 1/min: 1200

TD-travel

difference> mm: -0.80...1.00*

Shutoff

electromagnet>Volt: 12 SP press.-dif.measurement

1.Speed 1/min: 1200

Supply pump

pressure>

difference> bar: -0.10...0.30#

Shutoff electromagnet Volt: 12	+ electromagnet Volt: 12 + Del. quantity cm3/: 0.003.00
Inspection-pump test specifications	+ > 1000s.: (0.003.00) + 5th speed 1/min: 1620
Test specifications in parentheses	Shutoff electromagnet>Volt: 12
Timing-device characteristic:	Del. quantity cm3/: 21.0027.00 1000s.: (18.0030.00)
2nd speed	8th speed 1/min: 1550 Shutoff
> mm: (3.304.70) Shutoff	electromagnet>Volt: 12 Del. quantity cm3/: 37.0047.00
electromagnet>Volt: 12	1000s.: (36.0048.00)
3rd speed 1/min: 1200	+ 9th speed 1/min: 1500
TD travel mm: 2.502.90	+ Shutoff
> mm: (2.003.40)	+ electromagnet>Volt: 12
Shutoff	+ Del. quantity cm3/: 44.0047.00
electromagnet>Volt: 12	+ > 1000s.: (42.5048.50)
4th speed 1/min: 1000	+ 12th speed 1/min: 1200
TD travel mm: 1.302.10	+ Shutoff
> mm: (1.002.40)	+ electromagnet>Volt: 12
Shutoff	+ Del. quantity cm3/: 45.5046.50
electromagnet>Volt: 12	+ > 1000s.: (43.5048.50)
Supply-pump pressure characteristic:	20th speed 1/min: 600 Shutoff
supply pump pressure than acter is tit.	+ electromagnet>Volt: 12
1st speed 1/min: 600	Del. quantity cm3/: 46.0949.00
Supply-pump	+ > 1000s.: (44.5050.50)
pressure> bar: 2.803.40 Shutoff	1
	I
electromagnet>Volt: 12 3rd speed	Flectr. shutoff:
electromagnet>Volt: 12 3rd speed	+
electromagnet>Volt: 12 3rd speed 1/min: 1200 Supply-pump pressure> bar: 5.305.90 Shutoff	1st speed 1/min: 400 Del. quantity cm3/: 0.003.00
electromagnet>Volt: 12 3rd speed 1/min: 1200 Supply-pump pressure> bar: 5.305.90 Shutoff electromagnet>Volt: 12	+ 1st speed 1/min: 400
electromagnet>Volt: 12 3rd speed 1/min: 1200 Supply-pump pressure> bar: 5.305.90 Shutoff electromagnet>Volt: 12 4th speed 1/min: 1500	1st speed 1/min: 400 Del. quantity cm3/: 0.003.00 > 1000s.: (0.003.00)
electromagnet>Volt: 12 3rd speed 1/min: 1200 Supply-pump pressure> bar: 5.305.90 Shutoff electromagnet>Volt: 12 4th speed 1/min: 1500 Supply-pump	1st speed 1/min: 400 Del. quantity cm3/: 0.003.00
electromagnet>Volt: 12 3rd speed 1/min: 1200 Supply-pump pressure> bar: 5.305.90 Shutoff electromagnet>Volt: 12 4th speed 1/min: 1500 Supply-pump pressure> bar: 6.607.20	1st speed 1/min: 400 Del. quantity cm3/: 0.003.00 > 1000S.: (0.003.00) Idle delivery:
electromagnet>Volt: 12 3rd speed 1/min: 1200 Supply-pump pressure> bar: 5.305.90 Shutoff electromagnet>Volt: 12 4th speed 1/min: 1500 Supply-pump pressure> bar: 6.607.20 Shutoff	1st speed 1/min: 400 Del. quantity cm3/: 0.003.00 > 1000S.: (0.003.00) Idle delivery: 1st speed 1/min: 400
electromagnet>Volt: 12 3rd speed 1/min: 1200 Supply-pump pressure> bar: 5.305.90 Shutoff electromagnet>Volt: 12 4th speed 1/min: 1500 Supply-pump pressure> bar: 6.607.20	1st speed 1/min: 400 Del. quantity cm3/: 0.003.00 > 1000S.: (0.003.00) Idle delivery: 1st speed 1/min: 400 Shutoff
electromagnet>Volt: 12 3rd speed 1/min: 1200 Supply-pump pressure> bar: 5.305.90 Shutoff electromagnet>Volt: 12 4th speed 1/min: 1500 Supply-pump pressure> bar: 6.607.20 Shutoff electromagnet>Volt: 12	1st speed 1/min: 400 Del. quantity cm3/: 0.003.00 > 1000s.: (0.003.00) Idle delivery: 1st speed 1/min: 400 Shutoff electromagnet>Volt: 12
electromagnet>Volt: 12 3rd speed 1/min: 1200 Supply-pump pressure> bar: 5.305.90 Shutoff electromagnet>Volt: 12 4th speed 1/min: 1500 Supply-pump pressure> bar: 6.607.20 Shutoff	1st speed 1/min: 400 Del. quantity cm3/: 0.003.00 > 1000S.: (0.003.00) Idle delivery: 1st speed 1/min: 400 Shutoff
electromagnet>Volt: 12 3rd speed 1/min: 1200 Supply-pump pressure> bar: 5.305.90 Shutoff electromagnet>Volt: 12 4th speed 1/min: 1500 Supply-pump pressure> bar: 6.607.20 Shutoff electromagnet>Volt: 12 Overlow quantity at overflow valve: 1st speed 1/min: 600	1st speed 1/min: 400 Del. quantity cm3/: 0.003.00 > 1000s.: (0.003.00) Idle delivery: 1st speed 1/min: 400 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 10.5014.50 > 1000s.: (8.5016.50) Dispersion cm3/: 3.5
electromagnet>Volt: 12 3rd speed 1/min: 1200 Supply-pump pressure> bar: 5.305.90 Shutoff electromagnet>Volt: 12 4th speed 1/min: 1500 Supply-pump pressure> bar: 6.607.20 Shutoff electromagnet>Volt: 12 Overlow quantity at overflow valve: 1st speed 1/min: 600 Shutoff	1st speed 1/min: 400 Del. quantity cm3/: 0.003.00 > 1000S.: (0.003.00) Idle delivery: 1st speed 1/min: 400 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 10.5014.50 > 1000S.: (8.5016.50) Dispersion cm3/: 3.5 > 1000S.: (3.5)
electromagnet>Volt: 12 3rd speed 1/min: 1200 Supply-pump pressure> bar: 5.305.90 Shutoff electromagnet>Volt: 12 4th speed 1/min: 1500 Supply-pump pressure> bar: 6.607.20 Shutoff electromagnet>Volt: 12 Overlow quantity at overflow valve: 1st speed 1/min: 600 Shutoff electromagnet>Volt: 12	1st speed 1/min: 400 Del. quantity cm3/: 0.003.00 > 1000S.: (0.003.00) Idle delivery: 1st speed 1/min: 400 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 10.5014.50 > 1000S.: (8.5016.50) Dispersion cm3/: 3.5 > 1000S.: (3.5) 2nd speed 1/min: 550
electromagnet>Volt: 12 3rd speed 1/min: 1200 Supply-pump pressure> bar: 5.305.90 Shutoff electromagnet>Volt: 12 4th speed 1/min: 1500 Supply-pump pressure> bar: 6.607.20 Shutoff electromagnet>Volt: 12 Overlow quantity at overflow valve: 1st speed 1/min: 600 Shutoff electromagnet>Volt: 12 Overflow : 41.7083.40	1st speed 1/min: 400 Del. quantity cm3/: 0.003.00 > 1000S.: (0.003.00) Idle delivery: 1st speed 1/min: 400 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 10.5014.50 > 1000S.: (8.5016.50) Dispersion cm3/: 3.5 > 1000S.: (3.5) 2nd speed 1/min: 550 Shutoff
electromagnet>Volt: 12 3rd speed 1/min: 1200 Supply-pump pressure> bar: 5.305.90 Shutoff electromagnet>Volt: 12 4th speed 1/min: 1500 Supply-pump pressure> bar: 6.607.20 Shutoff electromagnet>Volt: 12 Overlow quantity at overflow valve: 1st speed 1/min: 600 Shutoff electromagnet>Volt: 12 Overflow quantity 12 Overflow : 41.7083.40 quantity> cm3/10s: (26.7098.40)	1st speed 1/min: 400 Del. quantity cm3/: 0.003.00 > 1000S.: (0.003.00) Idle delivery: 1st speed 1/min: 400 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 10.5014.50 > 1000S.: (8.5016.50) Dispersion cm3/: 3.5 > 1000S.: (3.5) 2nd speed 1/min: 550 Shutoff electromagnet>Volt: 12
electromagnet>Volt: 12 3rd speed 1/min: 1200 Supply-pump pressure> bar: 5.305.90 Shutoff electromagnet>Volt: 12 4th speed 1/min: 1500 Supply-pump pressure> bar: 6.607.20 Shutoff electromagnet>Volt: 12 Overlow quantity at overflow valve: 1st speed 1/min: 600 Shutoff electromagnet>Volt: 12 Overflow : 41.7083.40 quantity> cm3/10s: (26.7098.40) 2nd speed 1/min: 1500	1st speed 1/min: 400 Del. quantity cm3/: 0.003.00 > 1000S.: (0.003.00) Idle delivery: 1st speed 1/min: 400 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 10.5014.50 > 1000S.: (8.5016.50) Dispersion cm3/: 3.5 > 1000S.: (3.5) 2nd speed 1/min: 550 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 0.003.00
electromagnet>Volt: 12 3rd speed 1/min: 1200 Supply-pump pressure> bar: 5.305.90 Shutoff electromagnet>Volt: 12 4th speed 1/min: 1500 Supply-pump pressure> bar: 6.607.20 Shutoff electromagnet>Volt: 12 Overlow quantity at overflow valve: 1st speed 1/min: 600 Shutoff electromagnet>Volt: 12 Overflow : 41.7083.40 quantity> cm3/10s: (26.7098.40) 2nd speed 1/min: 1500 Shutoff	1st speed 1/min: 400 Del. quantity cm3/: 0.003.00 > 1000S: (0.003.00) Idle delivery: 1st speed 1/min: 400 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 10.5014.50 > 1000S: (8.5016.50) Dispersion cm3/: 3.5 > 1000S: (3.5) 2nd speed 1/min: 550 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 0.003.00 > 1000S: (0.003.00)
electromagnet>Volt: 12 3rd speed 1/min: 1200 Supply-pump pressure> bar: 5.305.90 Shutoff electromagnet>Volt: 12 4th speed 1/min: 1500 Supply-pump pressure> bar: 6.607.20 Shutoff electromagnet>Volt: 12 Overlow quantity at overflow valve: 1st speed 1/min: 600 Shutoff electromagnet>Volt: 12 Overflow : 41.7083.40 quantity> cm3/10s: (26.7098.40) 2nd speed 1/min: 1500 Shutoff electromagnet>Volt: 12	1st speed 1/min: 400 Del. quantity cm3/: 0.003.00 > 1000S: (0.003.00) Idle delivery: 1st speed 1/min: 400 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 10.5014.50 > 1000S: (8.5016.50) Dispersion cm3/: 3.5 > 1000S: (3.5) 2nd speed 1/min: 550 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 0.003.00 > 1000S: (0.003.00) 3rd speed 1/min: 440
electromagnet>Volt: 12 3rd speed 1/min: 1200 Supply-pump pressure> bar: 5.305.90 Shutoff electromagnet>Volt: 12 4th speed 1/min: 1500 Supply-pump pressure> bar: 6.607.20 Shutoff electromagnet>Volt: 12 Overlow quantity at overflow valve: 1st speed 1/min: 600 Shutoff electromagnet>Volt: 12 Overflow : 41.7083.40 quantity> cm3/10s: (26.7098.40) 2nd speed 1/min: 1500 Shutoff electromagnet>Volt: 12 Overflow : 55.60139.00	1st speed 1/min: 400 Del. quantity cm3/: 0.003.00 > 1000s.: (0.003.00) Idle delivery: 1st speed 1/min: 400 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 10.5014.50 > 1000s.: (8.5016.50) Dispersion cm3/: 3.5 > 1000s.: (3.5) 2nd speed 1/min: 550 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 0.003.00 > 1000s.: (0.003.00) 3rd speed 1/min: 440 Shutoff
electromagnet>Volt: 12 3rd speed 1/min: 1200 Supply-pump pressure> bar: 5.305.90 Shutoff electromagnet>Volt: 12 4th speed 1/min: 1500 Supply-pump pressure> bar: 6.607.20 Shutoff electromagnet>Volt: 12 Overlow quantity at overflow valve: 1st speed 1/min: 600 Shutoff electromagnet>Volt: 12 Overflow : 41.7083.40 quantity> cm3/10s: (26.7098.40) 2nd speed 1/min: 1500 Shutoff electromagnet>Volt: 12	1st speed 1/min: 400 Del. quantity cm3/: 0.003.00 > 1000s.: (0.003.00) Idle delivery: 1st speed 1/min: 400 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 10.5014.50 > 1000s.: (8.5016.50) Dispersion cm3/: 3.5 > 1000s.: (3.5) 2nd speed 1/min: 550 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 0.003.00 > 1000s.: (0.003.00) 3rd speed 1/min: 440 Shutoff electromagnet>Volt: 12
electromagnet>Volt: 12 3rd speed 1/min: 1200 Supply-pump pressure> bar: 5.305.90 Shutoff electromagnet>Volt: 12 4th speed 1/min: 1500 Supply-pump pressure> bar: 6.607.20 Shutoff electromagnet>Volt: 12 Overlow quantity at overflow valve: 1st speed 1/min: 600 Shutoff electromagnet>Volt: 12 Overflow : 41.7083.40 quantity> cm3/10s: (26.7098.40) 2nd speed 1/min: 1500 Shutoff electromagnet>Volt: 12 Overflow : 55.60139.00	1st speed 1/min: 400 Del. quantity cm3/: 0.003.00 > 1000s.: (0.003.00) Idle delivery: 1st speed 1/min: 400 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 10.5014.50 > 1000s.: (8.5016.50) Dispersion cm3/: 3.5 > 1000s.: (3.5) 2nd speed 1/min: 550 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 0.003.00 > 1000s.: (0.003.00) 3rd speed 1/min: 440 Shutoff
electromagnet>Volt: 12 3rd speed 1/min: 1200 Supply-pump pressure> bar: 5.305.90 Shutoff electromagnet>Volt: 12 4th speed 1/min: 1500 Supply-pump pressure> bar: 6.607.20 Shutoff electromagnet>Volt: 12 Overlow quantity at overflow valve: 1st speed 1/min: 600 Shutoff electromagnet>Volt: 12 Overflow : 41.7083.40 quantity> cm3/10s: (26.7098.40) 2nd speed 1/min: 1500 Shutoff electromagnet>Volt: 12 Overflow : 55.60139.00 quantity> cm3/10s: (40.60154.00)	1st speed 1/min: 400 Del. quantity cm3/: 0.003.00 > 1000s.: (0.003.00) Idle delivery: 1st speed 1/min: 400 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 10.5014.50 > 1000s.: (8.5016.50) Dispersion cm3/: 3.5 > 1000s.: (3.5) 2nd speed 1/min: 550 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 0.003.00 > 1000s.: (0.003.00) 3rd speed 1/min: 440 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 2.008.00 > 1000s.: (1.009.00)
electromagnet>Volt: 12 3rd speed 1/min: 1200 Supply-pump pressure> bar: 5.305.90 Shutoff electromagnet>Volt: 12 4th speed 1/min: 1500 Supply-pump pressure> bar: 6.607.20 Shutoff electromagnet>Volt: 12 Overlow quantity at overflow valve: 1st speed 1/min: 600 Shutoff electromagnet>Volt: 12 Overflow : 41.7083.40 quantity> cm3/10s: (26.7098.40) 2nd speed 1/min: 1500 Shutoff electromagnet>Volt: 12 Overflow : 55.60139.00 quantity> cm3/10s: (40.60154.00)	1st speed 1/min: 400 Del. quantity cm3/: 0.003.00 > 1000s.: (0.003.00) Idle delivery: 1st speed 1/min: 400 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 10.5014.50 > 1000s.: (8.5016.50) Dispersion cm3/: 3.5 > 1000s.: (3.5) 2nd speed 1/min: 550 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 0.003.00 > 1000s.: (0.003.00) 3rd speed 1/min: 440 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 2.008.00

1st speed 1/min: 1200 : -15.0..17.0# Inj.-qty. cm3/ difference> 1000S.: = Shutoff electromagnet>Volt: 12 3rd speed 1/min: 1200 cm3/: -18.0..26.0* Inj.-aty. difference> 1000s.: -Shutoff electromagnet>Volt: 12 TD-travel dif.measurement: correttore anticipo iniezione (SV): 1st speed 1/min: 1200 : -0.80...1.00* TD-travel difference> mm: -Shutoff electromagnet>Volt: 12 SP press.-dif.measurement: pompa di mandata (FP): 1/min: 1200 1st speed Supply pumppressure > : -0.10...0.30# difference> bar: -Shutoff electromagnet>Volt: 12 Automatic starting fuel delivery: 1/min: 200 1st speed Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 65.00...95.00 1000S.: (65.00...95.00) 1/min: 500 2nd speed Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 35.00...55.00 1000s.: (35.00...55.00) 1/min: 100 4th speed Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 60.00...100.00 1000s.: (60.00...100.00) Shutoff electromagnet: Cut-in >min voltage : 10.0 Rated voltage : 12.0 Mounting and assembly dimensions: Designation mm: 3.2...3.4 K KF mm: 5.8...6.2 mm: 0.6...1.0 MS

Ya mm: 37.2...39.2 Yb mm: 51.5...59.7

Remarks:

: .50(8.50...16.50) 3.

K₀9

BOSCH-INJ.-PUMP TEST SPECIFICATIONS Full-load del. with charge press.: Note inst. in remarks column Speed 1/min: 1600 Charge press. hPa: 750 Test scheet : VMA Del. quantity cm3/ : 02.06.92 1000s.: 47.00...48.00 Edition replaces : 07.84 cm3/: 3.0 Dispersion Calibrating oil : ISO4113 1000s .: -: VE4/10F1900L106 Injection pump Full-load del. w/out charge press.: Type number : 0 460 404 026 1/min: 600 Speed Customer-specific information Del. quantity cm3/ : VM MOTORI 1000s.: 32.00...35.00 Customer : HR 492 HT9 Engine Low-idle speed regulation TEST BENCH REQUIREMENTS Speed 1/min: 350 Charge press hPa: -Overflow restricti: 1 463 456 303 Del. quantity cm3/ > 1000s.: 16.00...20.00 Del. quantity cm3/: 2.5 Calibrating-oil return>temp. > °C 1000s.: with>thermometer>: 40...48 Electronically> : 42...50 Full-load speed regulation Inlet press., bar: 0.35 Speed 1/min: 190L Charge press hPa: 750 Calibrating nozzle-holder Del. quantity cm3/ : 1 688 901 000 1000s.: 43.50...46.50 assembly> Opening Start: Pressure> bar: 147...150 1/min: 100 Speed Charge press hPa: -Del. quantity cm3/: -Test inj. tubing : 1 680 750 017 mind> 1000s.: 65.00 Outside diameter : 6.00 x Wall>thickness : 2.00 Inspection-pump test specifications x Length> mm: 840 Test specifications in parentheses Start of delivery Timing-device characteristic: Prestroke mm: -(from BDC): -1st speed 1/min: 1000 Charge press hPa: 750 Injection-pump setting values TD travel mm: 1.00...1.80 Test specifications in parentheses mm: (0.70...2.10) 2nd speed 1/min: 1600 Timing-device travel Charge press hPa: 750 TD travel mm: 5.10...5.50 1/min: 1600 mm: (4.60...6.00) Speed Charge press. hPa: 750 3rd speed 1/min: 1900 Setting value mm: 5.10...5.50 Charge press hPa: 750 TD travel mm: 6.70...7.50 mm: (6.40...7.80) Supply-pump pressure Speed 1/min: 1600 Supply-pump pressure characteristic: Charge press hPa: 750

1/min: 400

1st speed

Setting value bar: 5.50...6.10

Charge press. hPa: 750	Mech. shutoff:
Supply-pump pressure> bar: 1.502.10	1-t emand 1/-in. 1000
2nd speed 1/min: 1600	- 1st speed 1/min: 1900
Charge press. hPa: 750	- - Idle delivery:
Supply-pump	Late delivery.
pressure> bar: 5.506.10	- 1st speed
3rd speed 1/min: 1900	- Del. quantity cm3/: 16.0020.00
Charge press. hPa: 750	- > 1000s.: 14.0022.00
Supply-pump	- Dispersion cm3/: 2.5
pressure> bar: 6.807.40	- > 1000s.: -
+	- 2nd speed 1/min: 430
Overlow quantity at overflow valve:	- Del. quantity cm3/: 2.60
 	- > 1000s.: -
1st speed 1/min: 500	- 3rd speed 1/min: 500
Overflow : 55.50111.10	- Del. quantity cm3/:1.00
quantity> cm3/10s: (40.50126.10)	- > 1000s.: -
2nd speed 1/min: 1900	
, , , , , , , , , , , , , , , , , , , ,	 Automatic starting fuel delivery:
quantity> cm3/10s: (40.50126.10)	4-1
Online would and breaker as	- 1st speed 1/min: 350
Delivery-quant. and breakaway char.:	- Del. quantity cm3/: 48.00 - > 1000s.: -
Ī	/ / 10005.: -
1nd speed 1/min: 750	- 2nd speed 1/min: 450
Charge-air pressure-setting	Del. quantity cm3/:47.50
point> hPa: 300	. Dec. quarterty this/:47.50
LDA-stroke mm: 4.2	Shutoff electromagnet:
Del. quantity cm3/: 41.5044.50	·
> 1000s.: (40.0046.00)	· Cut-in
2nd speed 1/min: 2100	>min voltage : 10.0
Charge press. hPa: 750	Rated voltage : 12.0
Del. quantity cm3/:1.00	
> 1000s.: -	Mounting and assembly dimensions:
3rd speed	•
Charge press. hPa: 750	Designation
Del. quantity cm3/: 2.00	K mm: 3.23.4
> 1000s.: -	KF mm: 5.76.0
4th speed 1/min: 2030 +	MS mm: 1.41.6
Charge press. hPa: 750	SVS max. mm: 3.6
Del. quantity cm3/: 17.0023.00 + 1000s.: (16.0024.00)	XK mm: 20.222.2
> 1000s.: (16.0024.00) + 5th speed 1/min: 1900 +	XL mm: 14.217.6 Ya mm: 37.239.2
Charge press. hPa: 750	Yb mm: 55.763.5
Del. quantity cm3/: 43.5046.50	15 inni. 55.705.5
> 10005:: (41.0049.00)	Remarks:
6th speed 1/min: 1600 +	: .0014.0022.00 2
Charge press. hPa: -	
Del. quantity cm3/: 31.0034.00 +	
> 1000s.: (29.8035.20) +	
7th speed 1/min: 1600 +	
Charge press. hPa: 750	
Del. quantity cm3/: 47.0048.00 +	
> 1000s.: (44.8050.20) +	
8th speed 1/min: 600	
Charge press. hPa: -	
Del. quantity cm3/: 32.0035.00	
> 1000s.: (30.5036.50) +	

BOSCH-INJ.-PUMP TEST SPECIFICATIONS Note inst. in remarks column Test scheet : VMA 2,2 D Edition : 18.02.91 replaces : 09.11.89 Calibrating oil : ISO-4113 Injection pump : VE4/10F2100L168-1 Type number : 0 460 404 042 Customer Part-No. : Customer-specific information Customer : VM : HR 492 HJ Engine TEST BENCH REQUIREMENTS Calibrating oil return>temp. > °C with>thermometer> : 40.00...48.00 Electronically> : 42.00...50.00 Inlet press., bar : 0.30...0.40 Calibrating nozzle-holder assembly> : 1 688 901 000 Opening | bar: 147.00...150.00 Pressure> Test inj. tubing : 1 680 750 017 Outside diameter : 6.00 x Wall>thickness : 2.00 x Length> mm: 840 Start of delivery Prestroke mm: -(from BDC): -Injection pump setting values Test specifications in parentheses Timing-device travel 1/min: 1000 Speed Charge press. hPa: 800

1/min: 1000 Speed Charge press hPa: 800 Setting value bar: 3.10...3.70 Shutoff electromagnet>Volt: 12 Full-load del. with charge press.: 1/min: 1500 Charge press. hPa: 800 Del. quantity cm3/ 1000s.: 60.50...61.50 Shutoff electromagnet>Volt: 12 cm3/: 3.0Dispersion 1000s.: (3.0) Full-load del. w/out charge press.: 1/min: 600 Speed Del. quantity cm3/ 1000s.: 40.50...41.50 Shutoff electromagnet>Volt: 12 Low-idle speed regulation 1/min: 400 Speed Del. quantity cm3/ 1000s.: 13.00...17.00 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 3.0 1000s.: (3.0) > Full-load speed regulation Speed 1/min: 2300 hPa: 800 Charge press Del. quantity cm3/ 1000s.: 27.00...33.00 Start: Speed 1/min: 100 Del. quantity cm3/: 37.00...67.00 1000s.: 37.00 mind> Shutoff electromagnet>Volt: 12 Load-dependent start of delivery: Inj.-qty.dif.measurement: 1/min: 1500 Speed cm3/Inj.-qty. difference> 1000S.: 8.00...14.00 Shutoff electromagnet>Volt: 12

TD-travel dif.measurement

Shutoff

Setting value mm: 1.80...2.20

electromagnet>Volt: 12

Supply-pump pressure

1.Speed 1/min:	1500	+		
TD-travel		+	1st speed 1/min:	
difference> mm:	0.901.10	+	Charge press. hPa:	890
Shutoff		+	Shutoff	
electromagnet>Volt:	12	1	electromagnet>Volt:	12
SP pressdif.measu		1	Overflow :	41.7083.40
(0.000)		1	quantity> cm3/10s:	
1.Speed 1/min:	1500	1	2nd speed 1/min:	
Supply pump	1500	T		
		T	Charge press. hPa:	800
pressure>	0.4 0.7	T	Shutoff	40
difference> bar:	0,10,5	+	electromagnet>Volt:	12
Shutoff		+	Overflow :	
electromagnet Volt:	12	+	quantity> cm3/10s:	(40.60154.00)
Inspection pump tes	et checifications	+	Dolivon/mayont and	brooks love show a
		T	Delivery-quant. and	breakaway char.:
Test specifications	in parentheses	Ť		
		+		
Timing-device chara	cteristic:	+	1nd speed 1/min:	
		+	Charge-air pressure	
2nd speed 1/min:	2100	+	point> hPa:	400
Charge press hPa:	800	+	LDA-stroke mm:	6,1
TD travel mm:	7.608.40	1	Shutoff	
	(7.308.70)	1	electromagnet>Volt:	12
Shutoff	(11001110)	1	Del. quantity cm3/:	52 00 53 00
electromagnet>Volt:	12	T		(50.0055.00)
3rd speed 1/min:		T		
		T	3rd speed 1/min:	
Charge press hPa:	800	+	Charge press. hPa:	800
TD travel mm:	1.802.20	+	Shutoff	
> mm:	(1.302.70)	+	electromagnet>Volt:	
Shutoff		+	Del. quantity cm3/:	1.009.00
electromagnet>Volt:	12			(0.509.50)
5th speed 1/min:		1	5th speed 1/min:	
Charge press. hPa:		1	Charge press. hPa:	
	4.405.20	1	Shutoff	355
> nm:	(4.105.50)	1	electromagnet>Volt:	10
Shutoff	(4.10).	\mathbf{I}	Del. quantity cm3/:	22 00 23 00
	43	T	vet. quartity clist:	(2/ 00 7/ 00)
electromagnet>Volt:	12	+		(26.0034.00)
-		+	9th speed 1/min:	
Supply-pump pressur	e characteristic:	+	Charge press. hPa:	800
		+	Shutoff	
1st speed 1/min:	2100	+	electromagnet>Volt:	12
Charge press. hPa:	800	+	Del. quantity cm3/:	52.5055.50
Supply-pump		+	> 1000s.:	(51.0057.00)
	6.907.50	1	12th speed 1/min:	
Shutoff		1	Charge press. hPa:	
electromagnet>Volt:	12	1	Shutoff	000
		T		10
		T	electromagnet>Volt:	
Charge press. hPa:	800	+	Del. quantity cm3/:	
Subbly-brumb		+		(59.0063.00)
	3.103.70	+	18th speed 1/min:	600
Shutoff		+	Shutoff	
electromagnet>Volt:	12	++++++++++++	electromagnet>Volt:	
3rd speed 1/min:		+	Del. quantity cm3/:	40.5041.50
Charge press. hPa:		+		(38.5043.50)
Supply-pump		1	20th speed 1/min:	
	1.802.40	1	Charge press. hPa:	
Shutoff		1	Shutoff	
	10	T		10
electromagnet>Volt:	16	T	electromagnet>Volt:	
Overlow quantity at		T	Del. quantity cm3/:	63.0066.00
こうしゅうしょ かいらいきゅうしょ ウナー	CHARTICH VOLVA!		211111111111111111111111111111111111111	ID (D) (D/ D)

Electr. shutoff: 1st speed 1/min: 400 Del. quantity cm3/: 0.00...3.00 1000s.: (0.00...3.00) Idle delivery: 1st speed 1/min: 400 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 13.00...17.00 1000s.: (10.00...20.00) cm3/: 3.0 > Dispersion 1000s.: (3.0) 1/min: 450 2nd speed Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 2.50...8.50 1000s.: (0.50...10.50) 4th speed 1/min: 600 Shutoff electromagnet Volt: 12 Del. quantity cm3/: 0.00...2.00 1000s.: (0.00...2.00) Load-dependent start of delivery: Inj.-qty.dif.measurement: 1st speed 1/min: 1500 Inj.-qty. cm3/ : 3.00...5.00 difference> 1000s.: -Shutoff electromagnet>Volt: 12 1/min: 1500 2nd speed 3rd speed 1/min: 1500 cm3/: 8.00...14.00 Inj.-qty. difference> 1000s.: (8.00...14.00) Shutoff electromagnet>Volt: 12 TD-travel dif.measurement: correttore anticipo iniezione (SV): 1/min: 1500 1st speed : 0.90...1.10 TD-travel mm: (0.90...1.10) difference> Shutoff electromagnet>Volt: 12 SP press.-dif.measurement: pompa di mandata (FP): 1/min: 1500 1st speed Supply pumppressure > : 0.10...0.30 bar: (0.20...0.20) difference> Shutoff

Automatic starting fuel delivery: 1st speed 1/min: 400 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 45.00...65.00 1000s.: (45.00...65.00) 2nd speed 1/min: 550 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 35.00...55.00 1000s.: (35.00...55.00) 1/min: 100 4th speed Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 37.00...67.00 1000s.: (37.00...67.00) Shutoff electromagnet: Cut-in >min voltage : 10.0 Rated voltage : 12.0 Mounting and assembly a mensions: Designation K mm: 3,2...3,4 mm: 5,6...6,0 KF MS mm: 0,6...1,0 SVS max. mm: 3,5 LDA stroke mm: 6,1 XK mm: 17,0...19,0 XL mm: 8,6...12,0 Remarks: : .00(10.00...20.00)3.

electromagnet>Volt: 12

BOSCH-INJ.-PUMP TEST SPECIFICATIONS Note inst. in remarks column : VMA 2,2 H Test scheet Edition : 18.02.91 replaces : 20.07.88 : ISO-4113 Calibrating oil Injection pump : VE4/10F2100L269 Type number : 0 460 404 050 Customer Part-No. : Customer-specific information Customer : HR 492 HJ Engine Power KW: 82 1/min: -Speed TEST BENCH REQUIREMENTS Calibrating-oil return>temp. > °C with>thermometer> : 40.00...48.00 Electronically> : 42.00...50.00 Inlet press., bar: 0.30...0.40 Calibrating nozzle-holder assembly> : 1 688 901 000 Opening bar: 147.00...150.00 Pressure> Test inj. tubing : 1 680 750 017 Outside diameter : 6.00 x Wall>thickness : 2.00 x Length> mm: 840 Start of delivery Prestroke mm: -(from BDC): -Indicator setting Piston stroke> mm: 1.0 Outlet> Injection-pump setting values Test specifications in parentheses

Charge press. hPa: 1000 Setting value mm: 1.50...1.90 electromagnet>Volt: 12 Supply-pump pressure 1/min: 1000 Speed Charge press hPa: 1000 Setting value bar: 4.40...5.00 electromagnet>Volt: 12 Full-load del. with charge press.: 1/min: 1500 Charge press. hPa: 1000 Del. quantity cm3/ > 1000s.: 66.00...67.00 Shutoff electromagnet>Volt: 12 cm3/: 3.0 Dispersion 1000s.: (3.0) Full-load del. w/out charge press.: Speed 1/min: 700 Del. quantity cm3/ 1000s.: 53.00...54.00 Shutoff electromagnet>Volt: 12 Low-idle speed regulation 1/min: 450 Del. quantity cm3/ 1000s.: 13.00...17.00 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 3.0 1000s.: (3.0) Full-load speed regulation Speed 1/min: 2300 hPa: 1000 Charge press Del. quantity cm3/ 1000s.: 27.00...33.00 Start: 1/min: 100 Del. quantity cm3/: 47.00...67.00 1000s.: 47.00 mind> Shutoff electromagnet>Volt: 12 Load-dependent start of delivery: Inj.-qty.dif.measurement:

Speed

Timing-device travel

1/min: 1000

Speed 1/min: 1500 Charge press. hPa: 1000 Inj.-qty. cm3/Supply-pump difference> 1000S.: 8.00...14.00 bar: 3.30...3.90 pressure> Shutoff Shutoff electromagnet>Volt: 12 electromagnet>Volt: 12 TD-travel dif.measurement Overlow quantity at overflow valve: 1/min: 1500 1. Speed TD-travel 1/min: 700 1st speed difference> mm: 0.90...1.10 Charge press. hPa: 800 Shutoff Shutoff electromagnet>Volt: 12 electromagnet>Volt: 12 SP press.-dif.measurement : 41.70...83.40 Overflow quantity> cm3/10s: (26.70...98.40) 2nd speed 1/min: 2100 1.Speed 1/min: 1500 Supply pump Charge press. hPa: 800 pressure> Shutoff difference> bar: 0.10...0.30 electromagnet>Volt: 12 : 55.60...139.00 Shutoff Overflow electromagnet Volt: 12 quantity> cm3/10s: (40.60...154.00) Inspection-pump test specifications Delivery-quant. and breakaway char.: Test specifications in parentheses Timing-device characteristic: 1/min: 700 1nd speed Charge-air pressure-setting 2nd speed 1/min: 2100 point> hPa: 450 hPa: 1000 Charge press LDA-stroke mm: 6.1 mm: 7.10...7.90 TD travel Shutoff electromagnet>Volt: 12
Del. quantity cm3/: 62.00...63.00
> 1000s.: (60.00...65.00) mm: (6.80...8.20) Shutoff electromagnet>Volt: 12 1/min: 1000 1/min: 2450 3rd speed 3rd speed hPa: 1000 Charge press Charge press. hPa: 1000 mm: 1.50...1.90 TD travel Shutoff mm: (1.00...2.40) electromagnet>Volt: 12 Shutoff Del. quantity cm3/: 0.00...8.00 1000s.: (0.00...8.00) electromagnet>Volt: 12 5th speed 1/min: 1500 Charge press. hPa: 1000 1/min: 2300 5th speed Charge press. hPa: 1000 TD travel mm: 4.10...4.90 Shutoff mm: (3.80...5.20) electromagnet>Volt: 12 Del. quantity cm3/: 27.00...33.00 Shutoff electromagnet>Volt: 12 1000s.: (26.00...34.00) 9th speed 1/min: 2100 Charge press. hPa: 1000 Supply-pump pressure characteristic: Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 57.70...60.70 1st speed 1/min: 2100 Charge press. hPa: 1000 1000s.: (56.20...62.20) Supply-pump bar: 7.50...8.10 1/min: 1500 pressure> 12th speed Shutoff Charge press. hPa: 1000 Shutoff electromagnet>Volt: 12 1/min: 1000 electromagnet>Volt: 12 2nd speed Charge press. hPa: 1000 Del. quantity cm3/: 66.00...67.00 1000s.: (64.50...68.50) Supply-pump bar: 4.40...5.00 pressure> 1/min: 600 16th speed Charge press. hPa: 1000 Shutoff electromagnet>Volt: 12 Shutoff 3rd speed 1/min: 700 electromagnet>volt: 12

Del. quantity cm3/: 52.50...54.50 mm: (0.90...1.10) difference> 1000H.: (52.00...55.00) Shutoff 1/min: 700 18th speed electromagnet>Volt: 12 Shutoff electromagnet>Volt: 12 SP press.—dif.measurement: Del. quantity cm3/: 53.00...54.00 pompa di mandata (FP): 1000s.: (51.00...56.00) 1st speed 1/min: 1500 1/min: 700 20th speed Supply pump-Charge press. hPa: 1000 pressure > : 0.10...0.30 Shutoff difference> bar: electromagnet>Volt: 12 Shutoff Del. quantity cm3/: 67.50...70.50 > 1000s.: (66.00...72.00) electromagnet>Volt: 12 Automatic starting fuel delivery: 1/min: 400 1st speed Electr. shutoff: Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 55.00...75.00 > 1000s.: (55.00...75.00) 1st speed 1/min: 450 Del. quantity cm3/: 0.00...3.00 1000s.: (0.00...3.00) 1/min: 550 2nd speed Idle delivery: Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 37.00...57.00 1st speed 1/min: 450 Shutoff 1000s.: (37.00...57.00) electromagnet>Volt: 12 Del. quantity cm3/: 13.00...17.00 4th speed 1/min: 100 1000s.: (10.00...20.00) cm3/: 3.0 Shutoff Dispersion electromagrwet>Volt: 12 1000s.: (3.0) Del. quantity cm3/: 47.00...67.00 1/min: 475 1000s.: (47.00...67.00) 2nd speed Shutoff electromagnet>Volt: 12 Shutoff electromagnet: Del. quantity cm3/: 7.00...13.00 1000s.: (5.00...15.00) Cut-in 1/min: 550 >min voltage 4th speed : 10.0 Shutoff Rated voltage : 12.0 electromagnet Volt: 12 Del. quantity cm3/: 0.50...5.50 Mounting and assembly dimensions: 1000s.: (0.50...5.50) Designation Load-dependent start of delivery: K mm: 3,2...3,4 KF Inj.-qty.dif.measurement: mm: 5,6...6.D mm: 0,6...1,0MS mm: 6,1 mm: 17.0...19.0 mm: 10.3...13.7 1/min: 1500 LDA stroke 1st speed Inj.-qty. cm3/ : 3.00...5.00 difference> 1000s.: -XK XL Shutoff electromagnet>Volt: 12 Remarks: 3rd speed 1/min: 1500 : .00(10.00...20.00)3. cm3/: 8.00...14.00 Inj.-qty. difference> 1000s.: (8.00...14.00) Shutoff electromagnet>Volt: 12 TD-travel dif.measurement:

TD-travel

correttore anticipo iniezione (SV):

: 0.90...1.10

1st speed 1/min: 1500

Note inst. in remarks column

Test scheet : VMA
Edition : 02.94
replaces : 13.07.88
Calibrating oil : ISO-4113

Injection pump : VE4/10F2100L168-2 Type number : 0 460 404 051

Customer Part-No. :

Customer-specific information

Customer : VM

Engine : HR 492 HT

Power KW: 76 Speed 1/min: 2100

TEST BENCH REQUIREMENTS

Overflow restricti: 1 463 456 303

Calibrating-oil return>temp. > °C

with>thermometer> : 40.00...48.00 Electronically> : 42.00...50.00

Inlet press., bar: 0.30...0.40

Calibrating nozzle-holder

assembly> : 1 688 901 000

Opening

Pressure> bar: 147.00...150.00

Test inj. tubing : 1 680 750 017

Outside diameter : 6.00 x Wall>thickness : 2.00 x Length> mm: 840

Start of delivery
Prestroke mm: > (from BDC): -

Injection-pump setting values Test specifications in parentheses

Timing-device travel

Speed 1/min: 1500 Charge press. hPa: 800

Setting value mm: 4.60...5.00

Shutoff

electromagnet>Volt: 12

Supply-pump pressure

Speed 1/min: 1500 Charge press hPa: 800

Setting value bar: 4.80...5.40

Shutoff

electromagnet>Volt: 12

Full-load del. with charge press.:

Speed 1/min: 1500 Charge press. hPa: 800 Del. quantity cm3/

> 1000s.: 56.50...57.50

Shutoff

electromagnet>Volt: 12 Dispersion cm3/: 3.0 > 1000s.: (3.0)

Full-load del. w/out charge press.:

Speed 1/min: 600 Del. quantity cm3/

> 1000s.: 45.50...46.50

Shutoff

electromagnet>Volt: 12

Low-idle speed regulation

Speed 1/min: 400

Del. quantity cm3/

> 1000s.: 13.00...17.00

Shutoff

electromagnet>Volt: 12 Del. quantity cm3/: 3.0 > 1000s.: (3.0)

Full-load speed regulation

Speed 1/min: 2300 Charge press hPa: 800

Del. quantity cm3/

> 1000s.: 27.00...33.00

Shutoff

electromagnet>Volt: 12

Start:

Speed 1/min: 100

Del. quantity cm3/: 37.00...67.00

mind> 1000s.: 37.00

Shutoff

electromagnet>Volt: 12

Load-dependent start of delivery:

Inj.-qty.dif.measurement:

Speed 1/min: 1500

Charge press hPa: -	-	-	
Injqty. cm3/	-	- 1st speed 1/min: 600	
difference> 1000s.: - 8.0.	14.0 '' -	- Charge press. hPa: 800	
Shutoff	-	- Shutoff	
electromagnet>Volt: 12	-	- electromagnet>Volt: 12	
TD-travel dif.measurement	-	- Overflow : 41.7086.2	
	-	 quantity> cm3/10s: (26.7010) 	1.20
1.Speed 1/min: 1500	-	- 2nd speed 1/min: 2100	
Charge press hPa: -	-	- Charge press. hPa: 800	
TD-travel	-	- Shutoff	
difference> mm: - 0.9	1.1 "	electromagnet>Volt: 12	
Shutoff	-	- Overflow : 55.60139.	.00
electromagnet>Volt: 12	-	quantity> cm3/10s: (40.60154	+.00
Inspection-pump test specif	fications	- - Delivery-quant. and breakaway ch	ar ·
Test specifications in pare		- Decreety quarter and breakaway or	141
, and appears to a control of the part	1	_	
Timing-device characteristi	ic:	- 1nd speed 1/min: 700	
	+	- Charge-air pressure-setting	
2nd speed 1/min: 2100	+	- point> hPa: 450	
Charge press hPa: 800	4	- LDA-stroke mm: 6.1	
TD travel mm: 7.60	.8.40	- Shutoff	
> mm: (7.30	.8.70)	- electromagnet>Volt: 12	
Shutoff	+	 Del. quantity cm3/: 52.0053.0 	JO
electromagnet>Volt: 12	+	- > 1000s.: (50.0055.	
3rd speed 1/min: 1500	4	- 3rd speed 1/min: 2450	
Charge press hPa: 800	+	- Charge press. hPa: 800	
TD travel mm: 4.60	5.00	- Shutoff	
> mm: (4.10	.5.50)	- electromagnet>Volt: 12	
Shutoff	+	- Del. quantity cm3/: 1.009.00	
electromagnet>Volt: 12	+	- > 1000s.: (0.509.50))
4th speed 1/min: 1000	+	- 5th speed 1/min: 2300	
Charge press hPa: 800	+	- Charge press. hPa: 800	
TD travel mm: 1.60		- Shutoff	
> mm: (1.30	.2.70)	electromagnet>Volt: 12	
Shutoff	+	Del. quantity cm3/: 27.0033.0	10
electromagnet>Volt: 12	+	> 1000s.: (26.0034.	00)
	+	9th speed 1/min: 2100	
Supply-pump pressure charac	teristic:	Charge press. hPa: 800	
	+	Shutoff	
1st speed	+	electromagnet>Volt: 12	
Charge press. hPa: 800	+	Del. quantity_cm3/: 48.9051.9	
Supply-pump	+	> 1000s.: (47.4053.	40)
pressure> bar: 6.90	7. <i>5</i> 0 +	12th speed	
Shutoff	+	Charge press. hPa: 800	
electromagnet>Volt: 12	+	Shutoff	
2nd speed 1/min: 1500	+	electromagnet>Volt: 12	
Charge press. hPa: 800	+	Del. quantity cm3/: 56.5057.5	
Supply-pump		> 1000s.: (55.0059.	00)
oressure> bar: 4.80	5.40	18th speed 1/min: 600	
Shutoff	+	Charge press. hPa: -	
electromagnet>Volt: 12	+	Shutoff	
3rd speed 1/min: 600	t t	electromagnet>Volt: 12	_
Charge press. hPa: 800	+	Del. quantity cm3/: 45.5046.5	U.
Supply-pump	, <u>, , , , , , , , , , , , , , , , , , </u>	> 1000s.: (43.5048.)	5U)
pressure> bar: 1.80	۲۰4 ۰ +	20th speed 1/min: 600	
Shutoff	†	Charge press. hPa: 800	
electromagnet>Volt: 12	†	Shutoff	
	†	electromagnet>Volt: 12	_
Overlow quantity at overflo	w valve: +	Del. quantity cm3/: 58.5061.50	U

1000s.: -2nd speed 1/min: 550 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 37.00...57.00 Electr. shutoff: 1000s.: (37.00...57.00) 1st speed 1/min: 400 1/min: 100 4th speed Del. quantity cm3/: 0.00...3.00 Shutoff 1000s.: (0.60...3.00) electromagnet>Volt: 12 Del. quantity cm3/: 37.00...67.00 Shutoff 1000s.: (37.00...67.00) electromagnet>volt: -Idle delivery: Shutoff electromagnet: 1st speed 1/min: 400 Cut-in Shutoff >min voltage : 10.0 Rated voltage electromagnet>Volt: 12 : 12.0 Del. quantity cm3/: 13.00...17.00 1000s.: (10.00...20.00) Mounting and assembly dimensions: cm3/: 3.0Dispersion 1000s.: (3.0) Designation 1/min: 600 2nd speed mm: 3.2...3.4 KF Shutoff mm: 5.6...6.0 MS mm: 0.6...1.0 electromagnet>Volt: 12 Del. quantity cm3/: 0.00...2.00 SVS max. mm: 2.3 1000s.: (0.00...2.00) LDA stroke mm: 6.1 mm: 17.0 ..19.0 3rd speed 1/min: 450 XK mm: 9.4...12.8 Shutoff XL electromagnet>Volt: 12 Del. quantity cm3/: 2.50...8.50 Remarks: 1000s.: (0.50...10.50) : .00(10.00...20.00)3. Load-dependent start of delivery: Inj.-qty.dif.measurement: 1st speed 1/min: 1500 Charge press. hPa: -Inj.-qty. cm3/ : -3.0...-5.0 # difference> 1000s.: -Shutoff electromagnet>Volt: 12 SP press.-dif.measurement: pompa di mandata (FP): 1/min: 1500 1st speed Charge press. hPa: -Supply pump-: -0.1...0.3 # pressure > difference> bar: -Shutoff electromagnet>Volt: 12 Automatic starting fuel delivery: 1/min: 400 1st speed Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 45.00...65.00 1000s.: (45.00...65.00)

Shutoff BOSCH-INJ.-PUMP TEST SPECIFICATIONS electromagnet>Volt: 12 Note inst. in remarks column Supply-pump pressure Test scheet : SOF 1/min: 600 Speed Edition : 01.07.92 Charge press hPa: 800 replaces Setting value bar: 3.40...4.00 : 18.07.89 Calibrating oil : ISO-4113 Shutoff electromagnet>Volt: 12 Injection pump : VE4/10F2050R318 Type number : 0 460 404 059 Full-load del. with charge press.: Customer-specific information Speed 1/min: 1950 Customer : IVECO-SOFIM Charge press. hPa: 800 Del. quantity cm3/ Engine : 8144.97.2200 1000s.: 56.00...57.00 Shutoff Power KW: 83 electromagnet>Volt: 12 cm3/: 3.0Dispersion TEST BENCH REQUIREMENTS 1000s.: (3.0) Overflow restricti: 1 463 456 303 Full-load del. w/out charge press.: Calibrating-oil 1/min: 500 Speed return>temp. > °C Del. quantity cm3/ 1000s.: 42.50...43.50 with>thermometer> : 40...48 Electronically> : 42...50 Shutoff electromagnet>Volt: 12 Inlet press., bar: 0.35 Low-idle speed regulation Calibrating nozzle-holder assembly> : 1 688 901 000 1/min: 425 Speed Del. quantity cm3/ 1000s.: 12.50...16.50 Opening Pressure> bar: 147.00...150.00 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 3.0 Test inj. tubing : 1 680 750 017 1000s.: (3.0) Outside diameter : 6.00 Full-load speed regulation x Wall>thickness : 2.00 x Length> mm: 840 1/min: 2475 Speed Charge press hPa: 800 Del. quantity cm3/ > 1000s.: 14.00...20.00 Start of delivery mm: 0.3 Prestroke (from BDC): +-0.02(0.04)Shutoff electromagnet>Volt: 12 Indicator setting Piston stroke> mm: 1.0 Start: Outlet> : A 1/min: 100 Del. quantity cm3/: 55.00...85.00 Injection-pump setting values Test specifications in parentheses 1000s.: 55.00 mind> Shutoff Timing-device travel electromagnet>Volt: 12 Speed 1/min: 600 Load-dependent start of delivery: Charge press. hPa: 800 Inj.-qty.dif.measurement:

Setting value

mm: 1.10...1.50

Speed 1/min: 600 Supply-pump Inj.-qty. cm3/pressure> bar: 5.20...5.80 difference> 1000s.: 13.00...19.00# Shutoff Shutoff electromagnet>Volt: 12 1/min: 2000 electromagnet>Volt: 12 3rd speed TD-travel dif.measurement Charge press. hPa: 800 Supply-pump 1/min: 600 1.Speed bar: 7.20...7.80 pressure> TD-travel Shutoff difference> mm: 0.60...0.80# electromagnet>Volt: 12 Shutoff electromagnet>Volt: 12 Overlow quantity at overflow valve: SP press.—dif.measurement 1st speed 1/min: 500 1/min: 600 1.Speed Shutoff electromagnet>Volt: 12 Supply pump pressure> : 41.70...83.30 bar: 0.10...0.30' difference> quantity> cm3/10s: (41.70...83.30) Shutoff 2nd speed 1/min: 2050 electromagnet Volt: 12 Charge press. hPa: 800 Shutoff Inspection pump test specifications electromagnet>Volt: 12 Test specifications in parentheses : 55.60...139.00 Overflow quantity> cm3/10s: (55.60...139.00) Timing-device characteristic: Delivery-quant. and breakaway char.: 1/min: 600 1st speed Charge press hPa: 800 mm: 1.10...1.50 1nd speed 1/min: 600* TD travel > mm: (0.80...1.80) Charge-air pressure-setting hPa: 290 electromagnet>Volt: 12 point> 1/min: 1200 mm: 5.3 2nd speed LDA-stroke hPa: 800 Charge press Shutoff mm: 4.20...5.00 TD travel electromagnet>Volt: 12 Del. quantity cm3/: 53.00...54.00 mm: (3.90...5.30) 1000s.: (51.00...56.00) Shutoff 1/min: 2550 electromagnet>Volt: 12 2nd speed 1/min: 2000 3rd speed Charge press. hPa: 800 hPa: 800 Shutoff Charge press mm: 8.70...9.50 TD travel electromagnet Volt: 12 mm: (8.40...9.80) Del. quantity cm3/: 0.00...6.00 Shutoff 1000s.: -3rd speed 1/min: 2475 electromagnet>Volt: 12 1/min: 2300 Charge press. hPa: 800 4th speed Charge press hPa: 800 Shutoff mm: 10.00...10.80 electromagnet>Volt: 12 TD travel Del. quantity cm3/: 14.00...20.00 > 1000s.: (11.00...23.00) 4th speed 1/min: 2350 mm: (10.00...10.80) > Shutoff electromagnet>Volt: 12 Charge press. hPa: 800 Supply-pump pressure characteristic: Shutoff electromagnet>Volt: 12 1/min: 600 Del. quantity cm3/: 31.00...39.00 1st speed Charge press. hPa: 800 1000s.: -Supply-pump 5th speed 1/min: 2050 pressure> bar: 3.40...4.00 Charge press. hPa: 800 Shutoff Shutoff electromagnet>Volt: 12 electromagnet>Volt: 12 Del. quantity cm3/: 54.00...57.00 2nd speed 1/min: 1200 1000s.: (53.30...57.70) Charge press. hPa: 800

6th speed 1/min: 1950 +	TD-travel dif.measurement:
Charge press. hPa: 800	correttore anticipo iniezione (SV):
Shutoff	1st speed 1/min: 600
electromagnet>Volt: 12 +	TD-travel : 0.600.80#
Del. quantity cm3/: 56.0057.00 +	difference> mm: (0.600.80)
> 1000s.: (54.5058.50) +	Shutoff
7th speed 1/min: 1200 +	electromagnet>Volt: 12
Charge press. hPa: 800	
Shutoff	SP pressdif.measurement:
electromagnet>Volt: 12	pompa di mandata (FP):
Del. quantity cm3/: 62.5065.50	1st speed 1/min: 600
> 1000s.: - +	Supply pump-
8th speed 1/min: 500	pressure > : 0.100.30'
Shutoff	difference> bar: (0.100.30)
electromagnet>Volt: 12	Shutoff
Del. quantity cm3/: 42.5043.50	electromagnet>Volt: 12
> 1000s.: (40.5045.50) +	
	Automatic starting fuel delivery:
1	rate actively.
1	1st speed 1/min: 350
Electr. shutoff:	Shutoff
Teccoli. Silucoli.	electromagnet>Volt: 12
1st speed	Del. quantity cm3/: 50.0070.00
Del. quantity cm3/: 0.003.00	> 10008:: (50.0070.00)
> 1000s.: (0.003.00)	> (0003 (30.00/0.00)
7	4th speed 1/min: 100
Tella dalauanua	Shutoff
Idle delivery:	electromagnet>Volt: 12
1st speed 1/min: 425	
• • • • • • • • • • • • • • • • • • •	Del. quantity cm3/: 55.0085.00 > 1000s - (55.00 - 85.00)
Shutoff	> 1000s.: (55.0085.00)
electromagnet>Volt: 12 +	Charles al antonion to
Del. quantity cm3/: 12.5016.50	Shutoff electromagnet:
> 1000s.: (10.5018.50)	Charles San
Dispersion cm3/: 3.0	Cut-in
> 1000s.: (3.0) +	>min voltage : 10.0
2nd speed 1/min: 500 +	Rated voltage : 12.0
Shutoff	08
electromagnet>Volt: 12	Mounting and assembly dimensions:
Del. quantity cm3/: 5.5010.50	W
> 1000s.: (5.5010.50) +	KF mm: 5.66.0
3rd speed 1/min: 700 +	MS mm: 1.62.0
Shutoff	XK mm: 20.022.0
electromagnet>Volt: 12	XL mm: 11.815.2
Del. quantity cm3/: 2.005.00 +	Ya mm: 37.939.9
> 1000s.: (2.005.00)	Yb mm: 41.647.2
+	
Load-dependent start of delivery: +	Remarks:
<pre>Injqty.dif.measurement: +</pre>	: .50(10.5018.50)3
+	
1st speed 1/min: 600 +	
Injqty. cm3/ : 13.0019.09#	
difference> 1000s.: (13.0019.00)	
Shutoff	
electromagnet>Volt: 12	
2nd speed 1/min: 600 +	
Injqty. cm3/: 11.0013.00'	
difference> 1000S.: (11.0013.00)	
Shutoff	
electromagnet Volt: 12	
1	
· ·	

Note inst. in remarks column

Test scheet : VMA
Edition : 02.94
replaces : 14.02.92
Calibrating oil : ISO-4113

Injection pump : VE4/10F1600L352 Type number : 0 460 404 061

Customer Part-No. :

Customer-specific information

Customer : VM

Engine : HR 494 HP

Power KW: 53 Speed 1/min: 1600

TEST BENCH REQUIREMENTS

Overflow restricti: 1 463 456 303

Calibrating-oil return>temp. > °C

with>thermometer> : 40.00...48.00 Electronically> : 42.00...50.00

Inlet press., bar : 0.30...0.40

Calibrating nozzle-holder

assembly> : 1 688 901 000

Opening |

Pressure> bar: 147.00...150.00

Test inj. tubing : 1 680 750 017

Outside diameter : 6.00 x Wall>thickness : 2.00 x Length> mm: 840

Start of delivery
Prestroke mm: > (from BDC): -

Injection-pump setting values
Test specifications in parentheses

Timing-device travel

Speed 1/min: 1200

Setting value mm: 1.90...2.30

Shutoff

electromagnet>Volt: 12

Supply-pump pressure

Speed 1/min: 1200

Setting value bar: 4.80...5.40

Shutoff

electromagnet>Volt: 12

Full-load del. with charge press.:

Speed 1/min: 1200

Del. quantity cm3/

> 1000s.: 43.50...44.50

Shutoff

electromagnet>Volt: 12 Dispersion cm3/: 3.5 > 1000S.: (3.5)

Low-idle speed regulation

Speed 1/min: 400

Del. quantity cm3/

> 1000s.: 11.50...15.50

Shutoff

electromagnet>Volt: 12 Del. quantity cm3/: 3.5 > 1000S.: (3.5)

Full-load speed regulation

Speed 1/min: 1650

Del. quantity cm3/

> 1000s.: 27.00...33.00

Shutoff

electromagnet>Volt: 12

Start:

Speed 1/min: 100

Del. quantity cm3/: 45.00...85.00

mind> 1000s.: 45.00

Shutoff

electromagnet>Volt: 12

Load-dependent start of delivery:

Inj.-qty.dif.measurement:

Speed 1/min: 1200

Inj.-qty. cm3/

difference> 1000s.: - 10.0..-18.0 #

Shutoff

electromagnet>Volt: 12
TD-travel dif.measurement

1.Speed 1/min: 1200

TD-travel

difference> mm: -0.9...-1.1 #

Shutoff

electromagnet>Volt: 12

Inspection-pump test specifications 1/min: 1650 5th speed Test specifications in parentheses Shutoff electromagnet>Volt: 12 Timing-device characteristic: Del. quantity cm3/: 27.00...33.00 1000s.: (24.00...36.00) 1/min: 1625 1/min: 1600 2nd speed 8th speed mm: 3.60...4.40 TD travel Shutoff mm: (3.30...4.70) electromagnet>Volt: 12 Del. quantity cm3/: 33.50...41.50 Shutoff electromagnet>Volt: 12 9th speed 1/min: 1600 1/min: 1200 3rd speed Shutoff mm: 1.90...2.30 TD travel electromagnet>Volt: 12 Del. quantity cm3/: 37.00...40.00 > 1000s.: (35.50...41.50) 12th speed 1/min: 1200 mm: (1.40...2.80) Shutoff electromagnet>Volt: 12 1/min: 1000 Shutoff 4th speed TD travel mm: 0.70...1.50 electromagnet>Volt: 12 mm: (0.40...1.80)Del. quantity cm3/: 43.50...44.50 1000s.: (41.00...47.00) Shutoff electromagnet>Volt: 12 20th speed 1/min: 600 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 42.50...45.50 > 1000s.: (41.00...47.00) Supply-pump pressure characteristic: 1/min: 600 2nd speed Supply-pump bar: 2.40...3.00 pressure> Mech. shutoff: Shutoff electromagnet>Volt: 12 1/min: 1200 3rd speed 1/min: 1600 1st speed Del. quantity cm3/: 0.00...3.00 Supply-pump bar: 4.80...5.40 pressure> 1000s.: (0.00...3.00) Shutoff Shutoff electromagnet>Volt: 12 electromagnet>volt: 12 1/min: 1600 4th speed Electr. shutoff: Supply-pump bar: 6.40...7.00 pressure> Shutoff 1st speed 1/min: 400 Del. quantity cm3/: 0.00...3.00 electromagnet>Volt: 12 1000s.: (0.00...3.00) Overlow quantity at overflow valve: Shutoff electromagnet>volt: -1/min: 600 1st speed Shutoff Idle delivery: electromagnet>Volt: 12 : 41.70...86.20 1/min: 400 1st speed quantity> cm3/10s: (26.70...101.20) Shutoff electromagnet>Volt: 12
Del. quantity cm3/: 11.50...15.50
> 1000s.: (9.50...17.50) 2nd speed 1/min: 1600 Shutoff electromagnet>Volt: 12 : 55.60...139.00 cm3/: 3.5 Dispersion Overflow 1000s.: (3.5) quantity> cm3/10s: (40.60...154.00) 1/min: 550 2nd speed Shutoff Delivery-quant. and breakaway char.: electromagnet>Volt: 12 Del. quantity cm3/: 0.00...3.00 > 1000s.: (0.00...3.00) 2nd speed 1/min: 1700 Shutoff 3rd speed 1/min: 480 electromagnet Volt: 12 Shutoff Del. quantity cm3/: 0.00...3.00 electromagnet>Volt: 12 1000s.: (0.00...3.00) Del. quantity cm3/: 2.00...8.00

```
>
             1000s.: (1.00...9.00)
Load-dependent start of delivery:
 Inj.-qty.dif.measurement:
 1st speed 1/min: 1200
Inj.-qty. cm3/
                : -5.0...-7.0 "
difference> 1000S.: -
Shutoff
electromagnet>Volt: 12
SP press.-dif.measurement:
pompa di mandata (FP):
             1/min: 1200
1st speed
Supply pump-
pressure >
                   : -0.1...-0.3 "
difference>
               bar: -
Shutoff
electromagnet>Voit: 12
Automatic starting fuel delivery:
             1/min: 250
1st speed
Shutoff
electromagnet>Volt: 12
Del. quantity cm3/: 50.00...80.00
            1000s.: (50.00...80.00)
2nd speed
             1/min: 450
Shutoff
electromagnet>Volt: 12
Del. quantity cm3/: 40.00...60.00
             1000s.: (40.00...60.00)
4th speed
             1/min: 100
Shutoff
electromagnet>Volt: 12
Del. quantity cm3/: 45.00...85.00
            1000s.: (45.00...85.00)
Shutoff electromagnet:
Cut-in
                  : 10.0
>min voltage
Rated voltage
                  : 12.0
Mounting and assembly dimensions:
Designation
                mm: 3.2...3.4
K
KF
                mm: 5.7...5.9
MS
                mm: 0.6...1.0
                mm: 1.3
SVS max.
XK
                mm: 17.0...19.0
                mm: 14.2...17.6
XL
Remarks:
                                   ...15
                  : .50(9.50...17.50) 3.
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Note inst. in remarks column

Test scheet : SOF

: 03.07.92 Edition replaces : 17.07.89 Calibrating oil : ISO-4113

Injection pump : VE4/10F2050R361 Type number : 0 460 404 064

Customer Part-No. :

Customer-specific information Customer : IVECO-SOFIM

Engine : 8144.97.2280

TEST BENCH REQUIREMENTS

Calibrating-oil return>temp. > °C

with>thermometer>: 40...48 Electronically> : 42...50

Inlet press., bar : 0.30...0.40

Calibrating nozzle-holder

assembly> : 1 688 901 000

Opening

Pressure> bar: 147.00...150.00

Test inj. tubing : 1 680 750 017

Outside diameter : 6.00 x Wall>thickness : 2.00 mm: 840 x Length>

Start of delivery

mm: 0.2 Prestroke

> (from BDC): +-0.02(0.04)

Injection-pump setting values Test specifications in parentheses

Timing-device travel

1/min: 1000 Speed Charge press. hPa: 1000

Setting value mm: 2.80...3.20

Shutoff

electromagnet>Volt: 12

Supply-pump pressure

Speed 1/min: 1000 Charge press hPa: 1000

Setting value bar: 5.10...5.70

Shutoff

electromagnet>Volt: 12

Full-load del. with charge press.:

Speed 1/min: 1200 Charge press, hPa: 1000

Del. quantity cm3/

1000s.: 62.50...63.50

Shutoff

electromagnet>Volt: 12 Dispersion cm3/: 3.0 1000s.: (3.0)

Full-load del. w/out charge press.:

1/min: 500

Del. quantity cm3/

1000s.: 35.50...36.50

Shutoff

electromagnet>Volt: 12

Low-idle speed regulation

1/min: 425 Speed

Del. quantity cm3/

> 1000s.: 9.00...13.00

Shutoff

electromagnet>Volt: 12 Del. quantity cm3/: 2.7 1000s.: (2.7)

Residual-Delivery Setting

1/min: 500 Speed

Del. quantity cm3/

1000s.: 3.00...7.00

Shutoff

electromagnet Volt: 12

Full-load speed regulation

1/min: 2500 Speed Charge press hPa: 1000

Del. quantity cm3/

1000s.: 21.00...27.00

electromagnet>Volt: 12

Start:

1/min: 100 Speed

Del. quantity cm3/: 60.00...90.00

mind> 1000s.: 60.00

Shutoff

electromagnet>Volt: 12

Load-dependent start of delivery: Charge press. hPa: 1000 Inj.-qty.dif.measurement: Supply-pump pressure> bar: 4.10...4.70 1/min: 1000 Speed Shutoff Charge press hPa: 1000 electromagnet>Volt: 12 1/min: 1000 cm3/Inj.-qty. 2nd speed difference> 1000s.: 14.50...20.50# Charge press. hPa: 1000 Shutoff Supply-pump electromagnet>Volt: 12 bar: 5.10...5.70 pressure> TD-travel dif.measurement Shutoff electromagnet>Volt: 12 1/min: 1000 1.Speed 1/min: 2000 3rd speed Charge press hPa: 1000 Charge press. hPa: 1000 TD-travel Supply-pump difference> mm: 0.60...0.80# bar: 7.30...7.90 pressure> Shutoff Shutoff electromagnet>Volt: 12 electromagnet>Volt: 12 SP press.-dif.measurement Overlow quantity at overflow valve: 1.Speed 1/min: 1000 hPa: 1000 Charge press 1st speed 1/min: 500 Supply pump Shutoff pressure> electromagnet>Volt: 12 bar: 0.10...0.30* difference> : 41.70...83.40 Overflow cm3/10s: (41.70...83.40) Shutoff quantity> electromagnet Volt: 12 2nd speed 1/min: 2300 Charge press. hPa: 1000 Inspection-pump test specifications Shutoff Test specifications in parentheses electromagnet>Volt: 12 Overflow : 55.60...139.00 Timing-device characteristic: quantity> cm3/10s: (55.60...139.00) 1/min: 2200 2nd speed Delivery quant. and breakaway char .: hPa: 1000 Charge press mm: 8.00...8.80 TD travel mm: (7.70...9.10) 1nd speed 1/min: 800 Shutoff Charge-air pressure-setting electromagnet>Volt: 12 hPa: 400 point> 3rd speed 1/min: 1000 Charge press hPa: 1000 LDA-stroke mm: 4.8 Shutoff mm: 2.80...3.20 TD travel electromagnet>Volt: 12 Del. quantity cm3/: 52.50...53.50 mm: (2.30...3.70) 1000s.: (50.50...55.50) Shutoff > 3rd speed 1/min: 2600 electromagnet>Volt: 12 1/min: 600 4th speed Charge press. hPa: 1000 hPa: 1000 Shutoff Charge press mm: 0.60...1.40 electromagnet>Volt: 12 TD travel Del. quantity cm3/: 0.00...7.00 > 1000s.: mm: (0.30,..1.70) Shutoff electromagnet>Volt: 12 5th speed 1/min: 2500 1/min: 2000 Charge press. hPa: 1000 6th speed Charge press. hPa: 1000 Shutoff TD travel mm: 7.40...8.20 electromagnet>Volt: 12 mm: (7.10...8.50) Del. quantity cm3/: 21.00...27.00 1000s.: (20.00...28.00) Shutoff 1/min: 2300 9th speed electromagnet>Volt: 12 Charge press. hPa: 1000 Supply-pump pressure characteristic: Shutoff electromagnet>Volt: 12 1st speed 1/min: 600 Del. quantity cm3/: 53.50...56.50

10th speed 1/min: 1950	+ Del. quantity cm3/: 1.004.00 + > 1000s.: -
Charge press. hPa: 1000 Shutoff	Load-dependent start of delivery:
electromagnet>Volt: 12 Del. quantity cm3/: 56.501.50	Inj.—qty.dif.measurement:
> 1000s.: -	2nd speed 1/min: 1000
11th speed 1/min: 800 Charge press. hPa: 1000	+ Charge press. hPa: 1000 + Inj. qty. cm3/: 12.0014.00*
Shutoff electromagnet>Volt: 12	difference> 1000S.: (12.0014.00) Shutoff
Del. quantity cm3/: 58.0061.00	+ electromagnet Volt: 12
> 1000s.: - 12th speed	+ 4th speed 1/min: 1000 + Charge press. hPa: 1600
Charge press. hPa: 1000 Shutoff	Injqty. cm3/: 14.5020.50# difference> 1000s.: (13.5021.50)
electromagnet>Volt: 12	+ Shutoff
Del. quantity cm3/: 62.5063.50 > 1000s.: (61.0065.00)	+ electromagnet>Volt: 12 + 2nd speed 1/min: 1000
18th speed 1/min: 500	+ Charge press. hPa: 1000
Shutoff electromagnet>Volt: 12	+ TD-travel : 0.600.80# + difference> mm: (0.600.80)
Del. quantity cm3/: 35.5036.50	+ Shutoff
> 1000s.: (33.5038.50)	+ electromagnet>Volt: 12 + 2nd speed 1/min: 1000
	Charge press. hPa: 1000
Electr. shutoff:	+ Supply pump- + pressure > : 0.10.30*
Etectr. Shutoff:	difference> bar: (0.100.30)
1st speed 1/min: 425	+ Shutoff
Del. quantity cm3/: 0.003.00 > 1000s.: (0.003.00)	electromagnet>Volt: 12
Damper set qty.:	Part-load del.at 3rd injqty. terza fermo della portata
LFG-setting:	+ stop (EGR set) + scarico) (ARF)
•	+ scarico) (ARF) + gaz d'échappement-ARF)
Idle delivery:	scarico) (ARF) gaz d'échappement-ARF) Spacing mm: 12.0
Idle delivery: 1st speed 1/min: 425	scarico) (ARF) gaz d'échappement-ARF) Spacing mm: 12.0 1st speed 1/min: 1000
Idle delivery: 1st speed 1/min: 425 Shutoff electromagnet Volt: 12	scarico) (ARF) gaz d'échappement-ARF) Spacing mm: 12.0
Idle delivery: 1st speed 1/min: 425 Shutoff electromagnet Volt: 12 Del. quantity cm3/: 9.0013.00	scarico) (ARF) gaz d'échappement-ARF) Spacing mm: 12.0 1st speed 1/min: 1000 Charge press. hPa: 1000 Shutoff electromagnet>Volt: 12
Idle delivery: 1st speed 1/min: 425 Shutoff electromagnet Volt: 12 Del. quantity cm3/: 9.0013.00 > 1000s.: (8.0014.00) 2nd speed 1/min: 475	scarico) (ARF) gaz d'échappement-ARF) Spacing mm: 12.0 1st speed 1/min: 1000 Charge press. hPa: 1000 Shutoff
Idle delivery: 1st speed 1/min: 425 Shutoff electromagnet Volt: 12 Del. quantity cm3/: 9.0013.00 > 1000s.: (8.0014.00) 2nd speed 1/min: 475 Shutoff	scarico) (ARF) gaz d'échappement-ARF) Spacing mm: 12.0 1st speed 1/min: 1000 Charge press. hPa: 1000 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 42.0044.00 > 1000s.: (40.5045.50)
Idle delivery: 1st speed 1/min: 425 Shutoff electromagnet Volt: 12 Del. quantity cm3/: 9.0013.00 > 1000s.: (8.0014.00) 2nd speed 1/min: 475	scarico) (ARF) gaz d'échappement-ARF) Spacing mm: 12.0 1st speed 1/min: 1000 Charge press. hPa: 1000 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 42.0044.00
Idle delivery: 1st speed 1/min: 425 Shutoff electromagnet Volt: 12 Del. quantity cm3/: 9.0013.00 > 1000s.: (8.0014.00) 2nd speed 1/min: 475 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 3.009.00 > 1000s.: -	scarico) (ARF) gaz d'échappement-ARF) Spacing mm: 12.0 1st speed 1/min: 1000 Charge press. hPa: 1000 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 42.0044.00 > 1000s.: (40.5045.50) Automatic starting fuel delivery: 1st speed 1/min: 200 Shutoff
Idle delivery: 1st speed 1/min: 425 Shutoff electromagnet Volt: 12 Del. quantity cm3/: 9.0013.00 > 1000s.: (8.0014.00) 2nd speed 1/min: 475 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 3.009.00	scarico) (ARF) gaz d'échappement-ARF) Spacing mm: 12.0 1st speed 1/min: 1000 Charge press. hPa: 1000 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 42.0044.00 > 1000S.: (40.5045.50) Automatic starting fuel delivery: 1st speed 1/min: 200 Shutoff electromagnet>Volt: 12
Idle delivery: 1st speed 1/min: 425 Shutoff electromagnet Volt: 12 Del. quantity cm3/: 9.0013.00 > 1000s.: (8.0014.00) 2nd speed 1/min: 475 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 3.009.00 > 1000s.: - Rest delivery: 1st speed 1/min: 500	scarico) (ARF) gaz d'échappement-ARF) Spacing mm: 12.0 1st speed 1/min: 1000 Charge press. hPa: 1000 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 42.0044.00 > 1000s.: (40.5045.50) Automatic starting fuel delivery: 1st speed 1/min: 200 Shutoff
Idle delivery: 1st speed 1/min: 425 Shutoff electromagnet Volt: 12 Del. quantity cm3/: 9.0013.00 > 1000s.: (8.0014.00) 2nd speed 1/min: 475 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 3.009.00 > 1000s.: - Rest delivery: 1st speed 1/min: 500 Shutoff electromagnet>Volt: 12	scarico) (ARF) gaz d'échappement-ARF) Spacing mm: 12.0 1st speed 1/min: 1000 Charge press. hPa: 1000 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 42.0044.00 > 1000S.: (40.5045.50) Automatic starting fuel delivery: 1st speed 1/min: 200 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 65.0095.00 > 1000S.: (65.0095.00) 2nd speed 1/min: 350
Idle delivery: 1st speed 1/min: 425 Shutoff electromagnet Volt: 12 Del. quantity cm3/: 9.0013.00 > 1000s.: (8.0014.00) 2nd speed 1/min: 475 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 3.009.00 > 1000s.: - Rest delivery: 1st speed 1/min: 500 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 3.807.00	scarico) (ARF) gaz d'échappement-ARF) Spacing mm: 12.0 1st speed 1/min: 1000 Charge press. hPa: 1000 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 42.0044.00 > 1000s.: (40.5045.50) Automatic starting fuel delivery: 1st speed 1/min: 200 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 65.0095.00 > 1000s.: (65.0095.00) 2nd speed 1/min: 350 Shutoff
Idle delivery: 1st speed 1/min: 425 Shutoff electromagnet Volt: 12 Del. quantity cm3/: 9.0013.00 > 1000s.: (8.0014.00) 2nd speed 1/min: 475 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 3.009.00 > 1000s.: - Rest delivery: 1st speed 1/min: 500 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 3.007.00 > 1000s.: (2.008.00) 2nd speed 1/min: 650	scarico) (ARF) gaz d'échappement-ARF) Spacing mm: 12.0 1st speed 1/min: 1000 Charge press. hPa: 1000 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 42.0044.00 > 1000s.: (40.5045.50) Automatic starting fuel delivery: 1st speed 1/min: 200 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 65.0095.00 > 1000s.: (65.0095.00) 2nd speed 1/min: 350 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 30.0040.00
Idle delivery: 1st speed 1/min: 425 Shutoff electromagnet Volt: 12 Del. quantity cm3/: 9.0013.00 > 1000s.: (8.0014.00) 2nd speed 1/min: 475 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 3.009.00 > 1000s.: - Rest delivery: 1st speed 1/min: 500 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 3.007.00 > 1000s.: (2.008.00)	scarico) (ARF) gaz d'échappement-ARF) Spacing mm: 12.0 1st speed 1/min: 1000 Charge press. hPa: 1000 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 42.0044.00 > 1000s.: (40.5045.50) Automatic starting fuel delivery: 1st speed 1/min: 200 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 65.0095.00 > 1000s.: (65.0095.00) 2nd speed 1/min: 350 Shutoff electromagnet>Volt: 12

1/min: 100 4th speed Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 60.00...90.00 1000s.: (60.00...90.00) Shutoff electromagnet: Cut-in >min voltage Rated voltage : 10.0 : 12.0 Mounting and assembly dimensions: KF mm: 5.6...6.0 mm: 1.6...2.0 MS Ya mm: 33.0...35.0 mm: 49.7...55.3 Yb Ajustement Potentiometer: Angle for ": ->12<-ARF pot. Supply voltage pot. > volt: 5.00 Output volt volt: 2.41 pot. > Remarks: ..0.0 : 0 (0.00...0.00)

BOSCH-INJ.-PUMP TEST SPECIFICATIONS Note inst. in remarks column Test scheet : VMA 2,2 F1 : 14.04.92 Edition : 18.02.91 replaces Calibrating oil : ISO-4113 : VE4/10F2100L269-1 Injection pump Type number : 0 460 404 065 Customer Part-No. : Customer-specific information Customer : HR 492.4 HJ Engine TEST BENCH REQUIREMENTS Overflow restricti: 1 463 456 303 Calibrating-oil return>temp. > °C with>thermometer> : 40.00...48.00 Electronically> : 42.00...50.00 Inlet press., bar : 0.30...0.40 Calibrating nozzle-holder : 1 688 901 000 assembly> Opening | bar: 147.00...150.00 Pressure> Test inj. tubing : 1 680 750 017 mm: 840

Outside diameter : 6.00 x Wall>thickness : 2.00 x Length> Start of delivery Prestroke mm: -(from BDC): -

Injection-pump setting values Test specifications in parentheses

Timing-device travel

1/min: 1000 Charge press. hPa: 1000 Setting value mm: 1.50...1.90 Shutoff

electromagnet>Volt: 12

Supply-pump pressure

1/min: 1000 Speed Charge press hPa: 1000 Setting value bar: 4.40...5.00 Shutoff

electromagnet>Volt: 12

Full-load del. with charge press.:

1/min: 1500 Speed Charge press. hPa: 1000 Del. quantity cm3/

1000s.: 66.00...67.00

Shutoff

electromagnet>Volt: 12 Dispersion cm3/: 3.0 1000s.: (3.0)

Full-load del. w/out charge press.:

Speed 1/min: 700 Del. quantity cm3/

1000s.: 45.00...46.00

Shutoff

electromagnet>Volt: 12

Low-idle speed regulation

1/min: 450 Speed Del. quantity cm3/

1000s.: 13.00...17.00

Shutoff

electromagnet>Volt: 12 Del. quantity cm3/: 3.0 1000s.: (3.0)

Full-load speed regulation

Speed 1/min: 2300 Charge press hPa: 1000 Del. quantity cm3/

1000s.: 27.00...33.00

Start:

Speed 1/min: 100

Del. quantity cm3/: 47.00...67.00

1000s.: 47.00 mind>

Shutoff

electromagnet>Volt: 12

Load-dependent start of delivery: Inj.-qty.dif.measurement:

1/min: 1500 Speed

cm3/Inj.-qty.

difference> 1000S.: 8.00...14.00

Shutoff

electromagnet>Volt: 12 TD-travel dif.measurement

		+	2nd speed 1/min:	2100
1.Speed 1/min:	1500	+	Charge press. hPa:	
TD-travel		+	Shutoff	
	0.901.10	+	electromagnet>Volt:	12
Shutoff		t	Overflow :	
electromagnet>Volt:	12	<u> </u>	quantity> cm3/10s:	(40.60154.00
Inspection-pump tes		+	Delivery-quant. and	breakaway char.
Test specifications	in parentheses	†		
Timing-device chara	ncteristic:	Ŧ	1nd speed 1/min:	700*
		t	Charge—air pressure	
2nd speed 1/min:		t	point> hPa:	450
	1000	ţ	Shutoff	40
TD travel mm:	/.10/.YU -	t	electromagnet>Volt:	
*******	(6.808.20)	t	Del. quantity cm3/:	
Shutoff	-	t		(56.5061.50)
electromagnet>Voit:		t	3rd speed 1/min:	
3rd speed 1/min:		t	Charge press. hPa:	1000
Charge press hPa:	1000 -	t	Shutoff	40
	1.501.90	t	electromagnet>Volt:	
	(1.002.40)	T	Del. quantity cm3/:	
Shutoff	- 13	t		(0.008.00)
electromagnet>Volt:		T	5th speed 1/min:	
5th speed 1/min:		T	Charge press. hPa:	1000
Charge press. hPa:	(UUU -	t	Shutoff	10
TD travel mm:	4.104.70 -	t	electromagnet>Volt:	12
7 mm:	(3.603.20)	t	Del. quantity cm3/:	(2/,)
Shutoff	43	†		(26.0034.00)
electromagnet>Volt:	12 -	†	9th speed 1/min:	
Street, name and a			Charge press. hPa:	1000
Supply-pump pressur	e characteristic:		Shutoff	13
1st speed 1/min:	2100		electromagnet>Volt:	12 54 50 50 50
Charge press. hPa:			Del. quantity cm3/:	(55.0061.00)
Supply-pump	1000	[12th speed 1/min:	
pressure> bar:	7.508.10		Charge press. hPa:	
Shutoff	7.500.10		Shutoff	1000
electromagnet>Volt:	12		electromagnet>Volt:	12
2nd speed 1/min:	1000		Del. quantity cm3/:	
Charge press. hPa:				(64.5068.50)
Supply—pump	1000		18th speed 1/min:	
	4.405.00		Shutoff	100
Shutoff]		electromagnet>Volt:	12
electromagnet>Volt:	12		Del. quantity cm3/:	
3rd speed 1/min:		_		(43.0048.00)
	1000	_	20th speed 1/min:	
Supply-pump	1	_	Charge press. hPa:	
	3.604.20	_	Shutoff	1000
Shutoff	1	-	electromagnet>Volt:	12
electromagnet>Volt:	12	-	Del. quantity cm3/:	
	1	-		(66.2072.20)
Overlow quantity at	overflow valve:	-		
1st speed 1/min:	700	-		
Charge press. hPa:		_	Electr. shutoff:	
Shutoff	1000	_	Lecti. Silutoff:	
electromagnet>Volt:	12	_	1st speed 1/min:	450
	41.7083.40	_	Del. quantity cm3/:	
quantity> cm3/10s:				(0.003.00)
Andite tele cilina in 100 *	T		- 10000.	

Idle delivery: Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 40.00...60.00 1st speed 1/min: 450 Shutoff 1000s.: (40.00...60.00) electromagnet>Volt: 12 Del. quantity cm3/: 13.00...17.00 4th speed 1/min: 100 1000s.: (10.00...20.00) Shutoff cm3/: 3.0 Dispersion electromagnet>Volt: 12 1000s.: (3.0) Del. quantity cm3/: 47.00...67.00 1/min: 475 1000s.: (47.00...67.00) 2nd speed Shutoff electromagnet>Volt: 12 Shutoff electromagnet: Del. quantity cm3/: 7.00...13.00 1000s.: (5.00...15.00) > Cut-in 1/min: 550 4th speed >min voltage : 10,0 Shutoff Rated voltage : 12,0 electromagnet Volt: 12 Del. quantity cm3/: 0.50...5.50 Mounting and assembly dimensions: 1000s.: (0.50...5.50) Designation Load-dependent start of delivery: K mm: 3,2...3,4 mm: 5,6...6,0 KF Inj.-aty.dif.measurement: MS mm: 0,6...1,0 1/min: 1500 mm: 20,0...22,0 1st speed XK Inj.-qty. cm3/ : 3.00...5.00 XL mm: 10,0...13,4 difference> 1000s.: -Shutoff Remarks: electromagnet>Volt: 12 1/min: 1500 : .00(10.00...20.00)3. 3rd speed cm3/: 8.00...14.00 Inj.-qty. difference> 1000S.: -Shutoff electromagnet>Volt: 12 TD-travel dif.measurement: correttore anticipo iniezione (SV): 1/min: 1500 1st speed : 0.90...1.10 TD-travel difference> mm: -Shutoff electromagnet>Volt: 12 SP press.-dif.measurement: pompa di mandata (FP): 1st speed 1/min: 1500 Supply pumppressure > : 0.10...0.30 difference> bar: -Shutoff electromagnet>Volt: 12 Automatic starting fuel delivery: 1st speed 1/min: 400 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 52.00...72.00

1/min: 550

2nd speed

1000s.: (52.00...72.00)

Note inst. in remarks column

Test scheet : SOF

: 02.08.93 Edition replaces : 07.12.92 : ISO-4113 Calibrating oil

: VE4/10F2050R364 Injection pump : 0 460 404 066 Type number

Customer Part-No. :

Customer-specific information Customer : SOFIM

: 8140.67.2580 Engine

TEST BENCH REQUIREMENTS

Overflow restricti: 1 463 456 303

Calibrating-oil return>temp. > °C

with>thermometer> : 40.00...48.00 Electronically> : 42.00...50.00

Inlet press., bar: 0.30...0.40

Calibrating nozzle-holder

: 1 688 901 022 assembly>

Opening |

Pressure> bar: 130.00...133.00

Test inj. tubing : 1 680 750 073

Outside diameter : 6.00 x Wall>thickness : 2.00 x Length> mm: 450

Start of delivery

Prestroke mm: 0.2

(from BDC): +-0.02(0.04)

Injection-pump setting values Test specifications in parentheses

Timing-device travel

1/min: 1000 Speed

Setting value mm: 3.10...3.50

Shutoff

electromagnet>Volt: 12

Supply-pump pressure

1/min: 1000 Speed

Setting value bar: 4.50...5.10

Shutoff

electromagnet>Volt: 12

Full-load del. w/out charge press.:

1/min: 2000 Speed

Del. quantity cm3/

1000s.: 41.00...42.00 >

Shutoff

electromagnet>Volt: 12 cm3/: 3.0 Dispersion 1000s.: (3.0)

Low-idle speed regulation

1/min: 375

Del. quantity cm3/

1000s.: 15.00...19.00

Shutoff

electromagnet>Volt: 12 Del. quantity cm3/: 3.0 1000s.: (3.0)

Full-load speed regulation

1/min: 2200 Speed

Del. quantity cm3/

1000s.: 14.00...20.00 >

Shutoff

electromagnet>Volt: 12

Start:

1/min: 100 Speed

Del. quantity cm3/: 70.00...100.00 mind> 1000s.: 70.00

Shutoff

electromagnet>Volt: 12

Load-dependent start of delivery:

Inj.-qty.dif.measurement:

Speed 1/min: 1000

Inj.-qty. cm3/

difference> 1000s.: 18.50...19.50 #

Shutoff

electromagnet>Volt: 12 SP press.-dif.measurement

1/min: 1000 1.Speed

Supply pump

pressure>

bar: 0.10....0.30# difference>

Shutoff

electromagnet Volt: 12

Inspection-pump test specifications Test specifications in parentheses

Timing-device characteristic:	bel. quantity cm3/: 0.003.00
-	> 1000s.: (0.003.00)
2nd speed 1/min: 1800	5th speed 1/min: 2200
TD travel mm: 7.308.10 -	Shutoff
> mm: (7.008.40) -	electromagnet>Volt: 12
Shutoff -	Del. quantity cm3/: 14.0020.00
electromagnet>Volt: 12	> 1000s.: (13.0021.00)
3rd speed 1/min: 1000	
5rd speed 1/mm: 1000 -	12th speed 1/min: 2000
TD travel mm: 3.103.50	Shutoff
> mm: (2.604.00)	electromagnet>Volt: 12
Shutoff	Pol. quantity cm3/: 41.0042.00
electromagnet>Volt: 12	> 1000s.: (39.5043.5)
4th speed 1/min: 600	15th speed 1/min: 1000
TD travel mm: 0.801.60	Shutoff
> mm: (0.501.90)	electromagnet>Volt: 12
Shutoff -	Del. quantity cm3/: 36.5039.50
electromagnet>Volt: 12	> 1000s.: (35.5040.50)
5th speed 1/min: 2000	17th speed 1/min: 600
	Shutoff
> mm: (7.909.30) -	electromagnet>volt: 12
Shutoff -	Del. quantity cm3/: 33.5036.50
electromagnet>Volt: 12	> 1000H.: (32.5037.50)
-	- 20th speed 1/min: 500
Supply-pump pressure characteristic:	Shutoff
	electromagnet>Volt: 12
1st speed 1/min: 2000	Del. quantity cm3/: 31.5038.50
Supply-pump	> 1000s.: (31.J039.00)
pressure> bar: 7.007.60	10000 (31.0037.00)
•	
Shutoff	
electromagnet>Volt: 12	-
2nd speed 1/min: 1000	- Electr. shutoff:
Supply-pump -	-
pressure> bar: 4.505.10	- 1st speed 1/min: 375
Shutoff +	- Del. quantity cm3/: 0.003.00
electromagnet>Volt: 12	- > 1000s.: (0.003.00)
3rd speed	- Shutoff
Supply-pump +	- electromagnet>volt: -
pressure> bar: 3.504.10	-
Shutoff	- Idle delivery:
electromagnet>Volt: 12	- Tate decivery.
etectromagnet/vott. 12	- 1st speed
Overland municipal extension of a conflor contract	
Overlow quantity at overflow valve:	- Shutoff
1	electromagnet>Volt: 12
1st speed 1/min: 500	- Del. quantity cm3/: 15.0019.00
Shutoff	4000- 440 00 00 00
electromagnet>Volt: 12	- > 1000s.: (12.0022.00)
Overflow : 41.7083.40	- Dispersion cm3/: 3.0
quantity> cm3/10s: (26.7098.40)	
quaritity/ clib/ lus. (20.7070.40)	- Dispersion cm3/: 3.0
	- Dispersion cm3/; 3.0 - > 1000s.: (3.0) - 2nd speed 1/min: 465
2nd speed 1/min: 2000	Dispersion cm3/: 3.0 1000S.: (3.0) 2nd speed 1/min: 465 Shutoff
2nd speed 1/min: 2000 + Shutoff	Dispersion cm3/: 3.0 1000s.: (3.0) 2nd speed 1/min: 465 Shutoff electromagnet>Volt: 12
2nd speed 1/min: 2000 Shutoff electromagnet>Volt: 12	Dispersion cm3/: 3.0 1000s.: (3.0) 2nd speed 1/min: 465 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 0.002.00
2nd speed 1/min: 2000 Shutoff electromagnet>Volt: 12 Overflow : 55.60139.00	Dispersion cm3/: 3.0 1000s.: (3.0) 2nd speed 1/min: 465 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 0.002.00 1000s.: (0.002.00)
2nd speed 1/min: 2000 Shutoff electromagnet>Volt: 12	Dispersion cm3/: 3.0 1000s.: (3.0) 2nd speed 1/min: 465 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 0.002.00 1000s.: (0.002.00) 3rd speed 1/min: 400
2nd speed 1/min: 2000 Shutoff electromagnet>Volt: 12 Overflow : 55.60139.00 quantity> cm3/10s: (40.60154.00)	Dispersion cm3/: 3.0 1000s.: (3.0) 2nd speed 1/min: 465 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 0.002.00 1000s.: (0.002.00) 3rd speed 1/min: 400 Shutoff
2nd speed 1/min: 2000 Shutoff electromagnet>Volt: 12 Overflow : 55.60139.00	Dispersion cm3/: 3.0 1000s.: (3.0) 2nd speed 1/min: 465 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 0.002.00 1000s.: (0.002.00) 3rd speed 1/min: 400 Shutoff electromagnet>Volt: 12
2nd speed 1/min: 2000 Shutoff electromagnet>Volt: 12 Overflow : 55.60139.00 quantity> cm3/10s: (40.60154.00)	Dispersion cm3/: 3.0 1000s: (3.0) 2nd speed 1/min: 465 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 0.002.00 3rd speed 1/min: 400 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 8.0014.00
2nd speed 1/min: 2000 Shutoff electromagnet>Volt: 12 Overflow : 55.60139.00 quantity> cm3/10s: (40.60154.00) Delivery-quant. and breakaway char.:	Dispersion cm3/: 3.0 1000s.: (3.0) 2nd speed 1/min: 465 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 0.002.00 1000s.: (0.002.00) 3rd speed 1/min: 400 Shutoff electromagnet>Volt: 12
2nd speed 1/min: 2000 Shutoff electromagnet>Volt: 12 Overflow : 55.60139.00 quantity> cm3/10s: (40.60154.00) Delivery-quant. and breakaway char.: 2nd speed 1/min: 2330	Dispersion cm3/: 3.0 1000s.: (3.0) 2nd speed 1/min: 465 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 0.002.00 3rd speed 1/min: 400 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 8.0014.00 1000s.: (6.0016.00)
2nd speed 1/min: 2000 Shutoff electromagnet>Volt: 12 Overflow : 55.60139.00 quantity> cm3/10s: (40.60154.00) Delivery-quant. and breakaway char.:	Dispersion cm3/: 3.0 1000s: (3.0) 2nd speed 1/min: 465 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 0.002.00 3rd speed 1/min: 400 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 8.0014.00

```
Inj.-qty.dif.measurement:
1st speed 1/min: 1000
Inj.-qty. cm3/ : 18.0..24.00 "
difference> 1000s.: (17.0..25.0) "
Shutoff
electromagnet>Volt: 12
            1/min: 1000
2nd speed
               cm3/: + 4.0..6.0
Ini.-aty.
difference> 1000s.: -
Shutoff
electromagnet Volt: 12
TD-travel dif.measurement:
correttore anticipo iniezione (SV):
1st speed 1/min: 1000
                  : 0.40...0.60 "
TD-travel
difference>
                mm: -
Shutoff
electromagnet>Volt: 12
             1/min: 1000
2nd speed
                  : 0.80...1.80 '
TD-travel
Automatic starting fuel delivery:
             1/min: 400
1st speed
Shutoff
electromagnet>Volt: 12
Del. quantity cm3/: 40.00...60.00
            1000s.: (40.00...60.00)
             1/min: 100
4th speed
Shutoff
electromagnet>Volt: 12
Del. quantity cm3/: 70.00...100.00
            1000s.: (70.00...100.00)
Shutoff electromagnet:
Cut-in
                  : 10.0
>min voltage
Rated voltage
                  : 12.0
Mounting and assembly dimensions:
Designation
K
                mm: -
                mm: 5.6...6.0
KF
                mm: 1.6...2.0
MS
                mm: 1.9
SVS max.
                mm: 37.9...39.9
Ya
                mm: 40.9...46.5
Yb
Remarks:
                  : .00(12.00...22.00)3.
```

BOSCH-INJ.-PUMP TEST SPECIFICATIONS Note inst. in remarks column : VMA 2,2 M Test scheet Edition : 18.02.91 : 07.11.89 replaces Calibrating oil : ISO-4113 : VE4/10F1600L379 Injection pump Type number : 0 460 404 067 Customer Part-No. : Customer-specific information Customer : HR 494 HT Engine Power KW: 68 TEST BENCH REQUIREMENTS Calibrating-oil return>temp. > °C with>thermometer> : 40.00...48.00 Electronically> : 42.00...50.00 Inlet press., bar : 0.30...0.40 Calibrating nozzle-holder assembly> : 1 688 901 000 **Opening** Pressure> bar: 147.00...150.00 Test inj. tubing : 1 680 750 017 Outside diameter : 6.00 x Wall>thickness : 2.00 mm: 840 x Length> Start of delivery Prestroke mm: -(from BDC): -Injection-pump setting values Test specifications in parentheses Timing-device travel

1/min: 1200

Charge press. hPa: 1000

electromagnet>Volt: 12

Setting value mm: 2.10...2.50

Supply-pump pressure 1/min: 1200 Charge press hPa: 1000 Setting value bar: 4,80...5.40 Shutoff electromagnet>Volt: 12 Full-load del. with charge press.: 1/min: 1200 Charge press. hPa: 1000 Del. quantity cm3/ 1000s.: 61.00...62.00 Shutoff electromagnet>Volt: 12 cm3/: 3.5 Dispersion 1000s.: (4.0) Full-load del. w/out charge press.: 1/min: 600 Speed Del. quantity cm3/ 1000s.: 52.00...53.00 Shutoff electromagnet>Volt: 12 Low-idle speed regulation 1/min: 400 Speed Del. quantity cm3/ 1000s.: 11.00...15.00 > Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 3.5 1000s.: (3.5) Full-load speed regulation 1/min: 1690 Speed Charge press hPa: 1000 Del. quantity cm3/ 1000s.: 42.00...48.00 Shutoff electromagnet>Volt: 12 Start: 1/min: 100 Speed Del. quantity cm3/: 60.00...100.00 mind> 1000s.: 60.00 Shutoff electromagnet>Volt: 12 Load-dependent start of delivery: Inj.-qty.dif.measurement: 1/min: 1200 Speed Charge press hPa: 1000 Inj.-qty. cm3/

Shutoff

difference> 1000s.: 19.0021.00	1	Charge press. hPa:	1000
Shutoff	I	Supply-pump	1000
electromagnet>Volt: 12	1	pressure> bar:	6.407.00
TD-travel dif.measurement	+	Shutoff	
	+	electromagnet>Volt:	12
1.Speed 1/min: 1200	+	_	
Charge press hPa: 1000	+	Overlow quantity at	overflow valve:
TD-travel	+		
difference> mm: 0.901.10	†	1st speed 1/min:	
Shutoff	†	Charge press. hPa:	1000
electromagnet>Volt: 12	†	Shutoff	40
SP press.—dif.measurement	†	electromagnet>Volt:	
1 Coord 1/min. 1200	†	Overflow :	
1.Speed 1/min: 1200	†	quantity> cm3/10s:	
Charge press hPa: 1000	T	2nd speed 1/min:	
Supply pump pressure>	Ť	Charge press. hPa: Shutoff	1000
difference> bar: 0.100.30	Ţ	electromagnet>Volt:	12
Shutoff	I	Overflow :	55 60 170 00
electromagnet Volt: 12	I	quantity> cm3/10s:	
etetti dilagnet vott. 12	I	qualitity this los.	(40.001)4.00/
Inspection-pump test specifications	1	Delivery-quant. and	breakaway char.:
Test specifications in parentheses	1	socitory quaries and	or curtainay oner
	1		
Timing-device characteristic:	+	1nd speed 1/min:	750 *
	+	Charge-air pressure	-setting
2nd speed 1/min: 1600	+	point> hPa:	200
Charge press hPa: 1000	+	Shutoff	
TD travel mm: 3.904.70	+	electromagnet>Volt:	
> mm: (3.605.00)	+	Del. quantity cm3/:	
Shutoff	+		(55.5061.50)
electromagnet>Volt: 12	+	3rd speed 1/min:	
3rd speed 1/min: 1200	t	Charge press. hPa:	1000
Charge press hPa: 1000	†	Shutoff	
TD travel mm: 2.102.50	+	electromagnet>Volt:	
> mm: (1.603.00)	+	Del. quantity cm3/:	
Shutoff	†		(0.003.00)
electromagnet>Volt: 12	†	5th speed 1/min:	
4th speed 1/min: 1000	†	Charge press. hPa:	1000
Charge press hPa: 1000	Ť	Shutoff	13
TD travel mm: 1.001.80 > mm: (0.702.10)	Ť	<pre>electromagnet>Volt: Del. quantity cm3/:</pre>	
Shutoff	I		(39.0051.00)
electromagnet>Volt: 12	I	9th speed 1/min:	
c coor onagric of voco. Te	1	Charge press. hPa:	
Supply-pump pressure characteristic:	1	Shutoff	
	4	electromagnet>Volt:	12
2nd speed 1/min: 750	1	Del. quantity cm3/:	
Charge press. hPa: 1000	1		(52.0058.00)
Supply-pump	+	12th speed 1/min:	
pressure> bar: 3.003.60	+	Charge press. hPa:	1000
Shutoff	+	Shutoff	
electromagnet>Volt: 12	+	electromagnet>Volt:	
3rd speed 1/min: 1200	+	Del. quantity cm3/:	61.1062.10
Charge press. hPa: 1000	+		(58.6064,60)
Supply-pump	+	18th speed 1/min:	600
pressure> bar: 4.805.40	+	Shutoff	4.5
Shutoff	+	electromagnet>Volt:	12
electromagnet>Volt: 12	†	Del. quantity cm3/:	
4th speed 1/min: 1600	+	> 10005.:	(49.5055.50)

20th speed 1/min: Charge press. hPa: Shutoff electromagnet>Volt: Del. quantity cm3/: > 1000s.:	1000 12	+ + + + + + + + + + + + + + + + + + + +	1st speed 1/min: Shutoff electromagnet>Volt: 2nd speed 1/min: Charge press. hPa: TD-travel : difference> mm: Shutoff	12 1200 1000 0.901.10
Mech. shutoff:		Ŧ	electromagnet>Volt:	12
1st speed 1/min: Del. quantity cm3/: > 1000S.: Shutoff electromagnet>volt:	0.003.00 (0.003.00)	T + + + + + + + + + + + + + + + + + + +	SP press.—dif.measure pompa di mandata (FP) 1st speed 1/min: Charge press. hPa: Supply pump— pressure > : 0): 1200
Electr. shutoff:		Ī	difference> bar: (
1st speed 1/min: Del. quantity cm3/:	0.003.00	+	<pre>electromagnet>Volt: 1 Shutoff</pre>	
	(0.003.00)	‡	electromagnet>Volt: 1	
Idle delivery:		‡	Automatic starting for	uel delivery:
1st speed 1/min: Shutoff		‡	1st speed 1/min: 2 Shutoff	
electromagnet>Volt:	12	+	electromagnet>Volt: 1	
Del. quantity cm3/:		+	Del. quantity cm3/: 5	
> 1000s.:	(8.5018.50)	+	> 1000s.: ((58.0088.00)
Dispersion cm3/:	3.5	+		
> 1000s.:		1	2nd speed 1/min: 4	50
2nd speed 1/min:		1	Shutoff	150
Shutoff	400	T		13
	42	T	electromagnet>Volt: 1	
electromagnet>Volt:		Ť	Del. quantity cm3/: 4	
Del. quantity cm3/:	2.008.00	†	> 1000s.: ((46.0066.00)
	(1.009.00)	†		
3rd speed 1/min:	550	+	4th speed 1/min: 1	00
Shutoff		+	Shutoff	
electromagnet>Volt:	12	+	electromagnet>Volt: 1	
Del. quantity cm3/:	0.003.00	+	Del. quantity cm3/: 6	0.00100.00
> 1000s.:	(0.003.00)	+	> 1000s.: ((60.00100.00)
		+		
Load-dependent start Injqty.dif.measure		İ	Shutoff electromagnet	•
		1	Cut-in	
1st speed 1/min:	1200	1	>min voltage : 1	0.0
Charge press. hPa:		1	Rated voltage : 1	
Inj.—qty. cm3/		T	nated voltage . 1	2.0
difference> 1000S.:		T	Mounting and assembly	dimonoiones
	(19.0021.00)	T	mounting and assembly	difficient toris:
Shutoff	42	T	Danismakian	
electromagnet>Volt:		+	Designation	
4th speed 1/min:		†		,23,4
Charge press. hPa:	7000	+		,66,0
Injqty. cm3/:		+		<u>,61,0</u>
difference> 1000S.:	(27.0035.00)	+	SVS max. mm: 1	,3
Shutoff		+		
electromagnet>Volt:	12	+	Remarks:	
-		+	:	15
TD-travel dif.measur	ement:	+	: .(00(8.5018.50) 3.
correttore anticipo		+		

BOSCH-INJ.-PUMP TEST SPECIFICATIONS Note inst. in remarks column Test scheet : VMA Edition : 08.95 replaces : 03.12.92 Calibrating oil : ISO-4113 Injection pump : VE4/10F2100L414 Type number : 0 460 404 068 Customer Part-No. : Customer-specific information Customer Engine : HR 425 CLI TEST BENCH REQUIREMENTS Overflow restricti: 1 463 456 303 Calibrating-oil return>temp. > °C with>thermometer> : 40.00...48.00 Electronically> : 42.00...50.00 Inlet press., bar : 0.30...0.40 Calibrating nozzle-holder assembly> : 1 688 901 022 Opening bar: 130.00...133.00 Pressure> Test inj. tubing : 1 680 750 073 Outside diameter : 6.00 x Wall>thickness : 2.00 x Length> mm: 450 Start of delivery Prestroke mm: -(from BDC): -Timing-device travel

Injection-pump setting values Test specifications in parentheses

1/min: 1000 Charge press. hPa: 1000 Setting value mm: 1.40...1.80

Shutoff

electromagnet>Volt: 12

Supply-pump pressure

1/min: 1000 Speed Charge press hPa: 1000 Setting value bar: 4.20...4.80 Shutoff electromagnet>Volt: 12 Full-load del. with charge press.: 1/min: 1500 Speed Charge press. hPa: 1000 Del. quantity cm3/ > 1000s.: 65.50...66.50 Shutoff electromagnet>Volt: 12 Dispersion cm3/: 3.0 1000s.: (3.0) Full-load del. w/out charge press.: 1/min: 700 Speed Del. quantity cm3/ 1000s.: 43.00...44.00 Shutoff electromagnet>Volt: 12 Low-idle speed regulation 1/min: 450 Speed Del. quantity cm3/ 1000s.: 13.00...17.00 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 3.0 1000s.: (3.0) Full-load speed regulation 1/min: 2300 Speed

Charge press hPa: 1000 Del. quantity cm3/

1000s.: 40.00...46.00

Shutoff electromagnet>Volt: 12

Start:

1/min: 100 Speed

Del. quantity cm3/: 45.00...75.00

1000s.: 45.00 mind>

Shutoff

electromagnet>Volt: 12

Load-dependent start of delivery: Inj.-qty.dif.measurement:

Speed 1/min: 1500 hPa: 1000 Charge press

Inj.-qty. cm3/

difference> 1000s.: -28.0...-34.0 #

Shutoff electromagnet>Volt: 12 electromagnet>Volt: 12 TD-travel dif.measurement Overlow quantity at overflow valve: 1.Speed 1/min: 1500 1/min: 700 1st speed Charge press hPa: 1000 Charge press. hPa: 1000 TD-travel Shutoff difference> mm: -0.5...-0.7 # electromagnet>Volt: 12 Shutoff Overflow : 41.70...83.40 electromagnet>Volt: 12 quantity> cm3/10s: (26.70...98.40) 2nd speed 1/min: 2100 Inspection-pump test specifications Charge press. hPa: 1000 Test specifications in parentheses Shutoff electromagnet>Volt: 12 Timing-device characteristic: Overflow : 55.60...139.00 quantity> cm3/10s: (40.60...154.00) 1/min: 1500 2nd speed hPa: 1000 Charge press Delivery-quant. and breakaway char .: mm: 3.40...4.20 TD travel mm: (3.10...4.50) Shutoff 1nd speed 1/min: 700 electromagnet>Volt: 12 Charge-air pressure-setting 1/min: 1000 3rd speed hPa: 350 point> hPa: 1000 Charge press LDA-stroke mm: 7.1 mm: 1.40...1.80 TD travel Shutoff mm: (0.90...2.30) > electromagnet>Volt: 12 Del. quantity cm3/: 55.50...56.50 Shutoff 1000s.: (53.50...58.50) 1/min: 2550 electromagnet>Volt: 12 > 1/min: 700 4th speed 3rd speed Charge press hPa: 1000 Charge press. hPa: 1000 mm: 0.20...1.00 TD travel Shutoff mm: (0.00...1.30) > electromagnet>Volt: 12 Del. quantity cm3/: 0.00...8.00 Shutoff 1000s.: (0.00...8.00) electromagnet>Volt: 12 1/min: 2100 1/min: 2300 5th speed 5th speed Charge press. hPa: 1000 Charge press. hPa: 1000 mm: 6.10...6.90 Shutoff TD travel mm: (5.80...7.20) electromagnet>Volt: 12 Shutoff Del. quantity cm3/: 40.00...46.00 1000s.: (39.00...47.00) electromagnet>Volt: 12 9th speed 1/min: 2100 Supply-pump pressure characteristic: Charge press. hPa: 1000 Shutoff electromagnet>Volt: 12
Del. quantity cm3/: 63.00...66.00
> 1000s.: (61.50...67.50) 1st speed 1/min: 2100 Charge press. hPa: 1000 Supply-pump bar: 7.20...7.80 1/min: 1500 pressure> 12th speed Charge press. hPa: 1000 Shutoff electromagnet>Volt: 12 Shutoff 1/min: 1000 2nd speed electromagnet>Volt: 12 Charge press. hPa: 1000 Del. quantity cm3/: 65.50...66.50 1000s.: (64.00...68.00) Supply-pump bar: 4.20...4.80 1/min: 700 18th speed pressure> Charge press. hPa: -Shutoff Shutoff electromagnet>Volt: 12 3rd speed 1/min: 700 electromagnet>Volt: 12 Charge press. hPa: 1000 Del. quantity cm3/: 43.00...44.00 1000s.: (41.00...46.00) Supply-pump pressure> bar: 3.20...3.80 20th speed 1/min: 700 Shutoff Charge press. hPa: 1000

Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 65.5068.50 > 1000s.: (64.0070.00)	Part-load del.at 3rd injqty. terza fermo della portata stop (EGR set) scarico) (ARF) gaz d'échappement-ARF)
Delivery-quant. and breakaway char.:	Spacing mm: 12.0
Inj.—qty.values,temp.—compensated	1st speed 1/min: 1000 Charge press. hPa: 1000 Shutoff
<pre>Del. quantity cm3/: 0.008.00 > 1000s.: (0.008.00)</pre>	electromagnet>Volt: 12 Del. quantity cm3/: 43.0044.00 1000s.: (41.0046.00)
Electr. shutoff:	Automatic starting fuel delivery:
1st speed 1/min: 450	1st speed 1/min: 400 Shutoff
Del. quantity cm3/: 0.003.00 > 1000s.: (0.003.00) Shutoff	<pre>electromagnet>Volt: 12 Del. quantity cm3/: 45.0075.00</pre>
electromagnet>volt: -	2nd speed 1/min: 550
Idle delivery:	+ Shutoff + electromagnet>Volt: 12
1st speed 1/min: 450 Shutoff electromagnet>Volt: 12	Del. quantity cm3/: 25.0045.00 > 1000s.: (25.0045.00)
Del. quantity cm3/: 13.0017.00 > 1000s.: (10.0020.00)	4th speed 1/min: 100 Shutoff
Dispersion cm3/: 3.0 > 1000s.: (3.0) 2nd speed 1/min: 600	<pre>electromagnet>Volt: 12</pre>
Shutoff electromagnet>Volt: 12	Shutoff electromagnet:
Del. quantity cm3/: 0.005.00 > 1000s.: (0.005.00)	+ Cut-in
<pre>3rd speed 1/min: 500 Shutoff electromagnet>Volt: 12</pre>	>min voltage : 10.0 Rated voltage : 12.0
Del. quantity cm3/: 2.507.50 > 1000s.: (2.008.00)	Mounting and assembly dimensions:
Load-dependent start of delivery: Injqty.dif.measurement:	Designation
1st speed	MS mm: 0.61.0 LDA stroke mm: 7.1
Charge press. hPa: 1000 Injqty. cm3/: -25.027.0" difference> 1000S.: -	XK mm: 38.840.8 mm: 37.246.8
Shutoff electromagnet>Volt: 12	Ajustement Potentiometer:
SP press.—dif.measurement:	Supply voltage pot. > volt. 5.0
pompa di mandata (FP): 1st speed 1/min: 1500	+ Output volt + pot. > volt: 2.31 +
pressure > : -0.10.3 " difference> bar: -	Remarks:

BOSCH-INJ.-PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test scheet : PENTA

Edition : 09.08.95 replaces : 02.94 Calibrating oil : ISO-4113

Injection pump : VE6/12F1950L527
Type number : 0 460 426 218

Customer Part-No. :

Customer—specific information Customer : PENTA

Engine : KAD / KAMD 42 CE

Power KW: 155

TEST BENCH REQUIREMENTS

Overflow restricti: 1 463 456 344

Calibrating-oil return>temp. > °C

with>thermometer> : 54.00...56.00

Inlet press., bar : 0.30...0.40

Calibrating nozzle-holder

assembly> : 1 688 901 110

Opening

Pressure> bar: 250.00...253.00

Perforated-plate

diameter> mm: 0.5

Test inj. tubing : 1 680 750 017

Outside diameter : 6.00 x Wall>thickness : 2.00 x Length> mm: 840

Start of delivery
Prestroke mm: 0.3

> (from BDC): +-0.02(0.04)

Injection pump setting values
Test specifications in parentheses

Timing-device travel

Speed 1/min: 1500 Charge press. hPa: 1500

Setting value mm: 3.30...3.70

Supply-pump pressure

Speed 1/min: 1500 Charge press hPa: 1500

Setting value bar: 7.70...8.30

Full-load del. with charge press.:

Speed 1/min: 1500 Charge press. hPa: 1500

Del. quantity cm3/

> 1000s.: 83.50...84.50

Dispersion cm3/: 5.0 > 1000s.: (5.0)

Full-load del. w/out charge press.:

Speed 1/min: 600 Del. quantity cm3/

> 1000s.: 57.50...58.50

Low-idle speed regulation

Speed 1/min: 325

Del. quantity cm3/

> 1000s.: 21.00...25.00

Del. quantity cm3/: 14.c > 1000s.: (14.0

Full-load speed regulation

Speed 1/min: 2050 Charge press hPa: 1500

Del. quantity cm3/

> 1000s.: 57.00...63.00

Start:

Speed 1/min: 100

Del. quantity cm3/: 20.00...70.00

mind> 1000s.: 20.00

Inspection-pump test specifications Test specifications in parentheses

Timing-device characteristic:

2nd speed 1/min: 1800 Charge press hPa: 1500

TD travel mm: 4.10...5.10 > mm: (3.70...5.50)

3rd speed 1/min: 1500

Charge press hPa: 1500

TD travel mm: 3.30...3.70 mm: (2.80...4.20)

4th speed 1/min: 1100 Charge press hPa: 1500

TD travel mm: 1.10...2.10 mm: (0.70...2.50)

5th speed 1/min: 1900 15th speed 1/min: 1250 Charge press. hPa: 1500 Del. quantity cm3/: 84.50...89.50 Charge press. hPa: 1500 mm: 4.50...5.50 TD travel mm: (4.10...5.90) 1000s.: (83.50...90.50) 1/min: 600 18th speed Supply-pump pressure characteristic: Charge press. hPa: -Del. quantity cm3/: 57.50...58.50 1st speed 1/min: 1900 1000s.: (55.00...61.00) 20th speed 1/min: 800 Charge press. hPa: 1500 Charge press. hPa: 1500 Del. quantity cm3/: 94.00...101.0 Supply-pump bar: 9.00...9.60 pressure> 2nd speed 1/min: 1500 1000s.: (92.50...102.50) Charge press. hPa: 1500 Supply-pump bar: 7.70...8.30 pressure> Mech. shutoff: 4th speed 1/min: 800 Charge press. hPa: 1500 1st speed 1/min: 1900 Charge press. hPa: 1500 Del. quantity cm3/: 0.00...3.00 Supply-pump pressure> bar: 5.20...5.80 1000s.: (0.00...3.00) Overlow quantity at overflow valve: Shutoff electromagnet>volt: -1st speed 1/min: 800 Charge press. hPa: 1500 Electr. shutoff: : 69.50...152.90 Overflow quantity> cm3/10s: (54.50...167.90) 2nd speed 1/min: 1900 1st speed 1/min: 325 Charge press. hPa: -Charge press. hPa: 1500 Del. quantity cm3/: 0.0....3.00 : 97.30...180.70 Overflow 1000s.: (0.00...3.00) quantity> cm3/10s: (82.30...195.70) Shutoff electromagnet>volt: 12.0 Delivery-quant. and breakaway char .: Idle delivery: 1nd speed 1/min: 800 1/min: 325 1st speed Del. quantity cm3/: 21.00...25.00 Charge-air pressure-setting point> 1000s.: (18.00...28.00) hPa: 750 mm: 7.1 1/min: 580 LDA-stroke 2nd speed Del. quantity cm3/: 85.00...86.00 > 1000s.: (81.50...89.50)
2nd speed 1/min: 2300 Del. quantity cm3/: 0.00...3.00 1000s.: (0.00...3.00) Charge press. hPa: 1500 Automatic starting fuel delivery: Del. quantity cm3/: 0.00...3.00 1000s.: (0.00...3.00) 1st speed 1/min: 275 1/min: 2050 Del. quantity cm3/: 50.00...100.00 5th speed Charge press. hPa: 1500

Del. quantity cm3/: 57.00...63.00

> 1000s.: (52.00...68.00)

8th speed 1/min: 2180

Charge press. hPa: 1500

Del. quantity cm3/: 0.00...25.00 1000s.: (50.00...100.00) 1/min: 400 2nd speed Del. quantity cm3/: 30.00...60.00 > 1000s.: (30.00...60.00) 1000s.: (0.00...25.00) 4th speed 1/min: 100 1/min: 1900 Del. quantity cm3/: 20.00...70.00 9th speed Charge press. hPa: 1500 Del. quantity cm3/: 75.50...79.50 > 1000s.: (74.00...81.00) 1000s.: (20.00...70.00) Shutoff electromagnet: 12th speed 1/min: 1500 Charge press. hPa: 1500 Cut-in Del. quantity cm3/: 83.50...84.50 >min voltage : 10.0 1000s.: (81.00...87.00) Rated voltage : 12.0

Mounting and assembly dimensions:

Designation

(mm: -

MS mm: 0.8...1.2

LDA stroke mm: 7.1

Ya mm: 37.2...39.2 Yb mm: 49.1...56.9

Remarks:

: FB = 1,70 MM

Ya = Distance between VE flange and speed-control lever in idle position

Measurement point = edge of control lever on drive end

Yb = Distance between VE flange and speed-control lever in rated speed position

Measurement point = edge of control lever on distributor—head end

Operate control lever after each manifold-pressure compensator pressure change.

Pushing electromagnet.

BOSCH-INJ.-PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test scheet : PENTA Edition : 09.08.95 replaces : 03.94 Calibrating oil : ISO-4113

Injection pump : VE6/12F1950L528 Type number : 0 460 426 219

Customer Part-No. :

Customer-specific information Customer : PENTA

Engine : KAD 42

Power KW: 169

TEST BENCH REQUIREMENTS

Overflow restricti: 1 463 456 344

Calibrating-oil return>temp. > °C

with>thermometer> : 54.00...56.00

Inlet press., bar: 0.30...0.40

Calibrating nozzle-holder

assembly> : 1 688 901 110

Openina

Pressure> bar: 250.00...253.00

Perforated-plate

diameter> mm: 0.5

Test inj. tubing : 1 680 750 017

Outside diameter : 6.00 x Wall>thickness : 2.00 x Length> mm: 840

Start of delivery

mm: 0.3 Prestroke

(from BDC): +-0.02(0.04)

Injection-pump setting values Test specifications in parentheses

Timing-device travel

1/min: 1500 Speed Charge press. hPa: 1500

Setting value mm: 4.10...4.30

Supply-pump pressure

1/min: 1500 Speed Charge press hPa: 1500

Setting value bar: 8.00...8.60

Full-load del. with charge press.:

1/min: 1800 Speed Charge press. hPa: 1500

Del. quantity cm3/

1000s.: 88.50...89.50

cm3/: 5.0 Dispersion 1000s.: (5.0)

Full-load del. w/out charge press.:

1/min: 600 Speed

Del. quantity cm3/

1000s.: 42.00...43.00

Low-idle speed regulation

1/min: 325 Speed

Del. quantity cm3/

1000s.: 7.00...11.00

Del. quantity cm3/: 5.0 1000s.: (5.0)

Full-load speed regulation

1/min: 2180 Speed Charge press hPa: 1500

Del. quantity cm3/

1000s.: 9.00...15.00

Start:

1/min: 100 Speed

Del. quantity cm3/: 40.00...90.00

mind> 1000s.: 40.00

Inspection-pump test specifications Test specifications in parentheses

Timing-device characteristic:

1/min: 1900 2nd speed hPa: 1500 Charge press

mm: 6.20...7.00 TD travel mm: (5.90...7.30)

1/min: 1500 3rd speed Charge press hPa: 1500

mm: 4.10...4.30 TD travel

> mm: (3.50...4.90)
4th speed 1/min: 1100

Charge press hPa: 1500

mm: 1.00...1.80 TD travel mm: (0.70...2.10)

+	- 18th speed 1/min: 600
Supply-pump pressure characteristic:	Charge press. hPa: -
1st speed 1/min. 1000	Del. quantity cm3/: 42.0043.00
1st speed 1/min: 1900 Charge press. hPa: 1500	- > 1000s.: (39.5045.50)
	-
Supply-pump pressure> bar: 9.109.70	- - Mech. shutoff:
2nd speed 1/min: 1500	- recn. sincorr.
Charge press. hPa: 1500	- - 1st speed
Supply-pump	Charge press. hPa: 1500
pressure> bar: 8.008.60	- Del. quantity cm3/: 0.003.00
3rd speed 1/min: 1100	- > 1000s.: (0.003.00)
Charge press. hPa: 1500	- Shutoff
Supply-pump +	<pre>- electromagnet>volt: -</pre>
pressure> bar: 6.807.40	-
<u> </u>	- Electr. shutoff:
Overlow quantity at overflow valve:	
†	1st speed 1/min: 325
1st speed 1/min: 600	Del. quantity cm3/: 0.003.00
Charge press. hPa: 1500	> 1000s.: (0.003.00)
Overflow : 88.90133.40	Shutoff
quantity> cm3/10s: (73.90148.40) + 2nd speed 1/min: 1950 +	electromagnet>volt: 12.0
Charge press. hPa: 1500	· Idle delivery:
Overflow : 97.30180.70	. Interdetivery.
quantity> cm3/10s: (82.30195.70)	1st speed 1/min: 325
quarter by and rose (see so en 173210)	Del. quantity cm3/: 7.0011.00
Delivery-quant. and breakaway char.:	> 1000s.: (414.00)
The state of the s	Dispersion cm3/: 5.0
1	> 1000s.: (5.0)
1nd speed 1/min: 800 +	2nd speed 1/min: 450
Charge-air pressure-setting	Del. quantity cm3/: 0.003.00
point> hPa: 750	> 1000s.: (0.003.00)
LDA-stroke mm: 7.5	
Del. quantity cm3/: 64.5065.50	Automatic starting fuel delivery:
> 1000s.: (61.0069.00)	
2nd speed 1/min: 2300 +	1st speed 1/min: 275
Charge press. hPa: 1500	Del. quantity cm3/: 50.00100.00
Del. quantity cm3/: 0.003.00	> 1000s.: (50.00100.00)
> 1000s.: (0.003.00)	2. 1
5th speed 1/min: 2180	2nd speed 1/min: 450
Charge press. hPa: 1500 + Del. quantity cm3/: 9.0015.00 +	Del. quantity cm3/: 25.0055.00 > 1000s.: (25.0055.00)
> 1000s.: -	/ 10003 (25.0055.00)
9th speed 1/min: 1950	4th speed 1/min: 100
Charge press. hPa: 1500	Del. quantity cm3/: 40.0090.00
Del. quantity cm3/: 86.0090.00	> 1000s.: (40.0090.00)
> 1000s.: (84.5091.50)	
12th speed	Shutoff electromagnet:
Charge press. hPa: 1500	5,14,55 v. 5,55 v. 5,1115
Del. quantity cm3/: 88.5089.50	Cut-in
> 1000s.: (86.0092.00) +	>min voltage : 10.0
15th speed	Rated voltage : 12.0
Charge press. hPa: 1500 +	
Del. quantity cm3/: 88.5093.50 +	Mounting and assembly dimensions:
> 1000s.: (87.5094.50)	
17th speed 1/min: 1250 +	Designation
Charge press. hPa: 1500 +	K mm: -
Del. quantity cm3/: 83.5088.50	KF mm: KOT
> 1000H.: (82.5089.50) +	MS mm: 1.61.9

LDA stroke

mm: 7.5

Ya

mm: 37.2...39.2 mm: 55.1...62.9

Yb

Remarks:

Ya = Distance between VE flange and speed-control lever in idle position

Measurement point = edge of control Lever on drive end

Yb = Distance between VE flange and speed-control lever in rated speed position Measurement point = edge of control Lever on distributor-head end

Pushing electromagnet.

Operate control lever after each manifold-pressure compensator pressure change.

BOSCH-INJ.-PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test scheet : VWW
Edition : 06.95
replaces : 03.12.91
Calibrating oil : ISO-4113

Injection pump : VE4/8F2100R357 Type number : 0 460 484 031

Customer Part-No. :

Customer-specific information

Customer : VW

Engine : 028.A 1.91.

Power KW: 45

TEST BENCH REQUIREMENTS

Calibrating-oil return>temp. > °C

with>thermometer> : 40.00...48.00 Electronically> : 42.00...50.00

Inlet press., bar : 0.30...0.40

Calibrating nozzle-holder

assembly> : 1 688 901 000

Opening

Pressure> bar: 147.00...150.00

Test inj. tubing : 1 680 750 017

Outside diameter : 6.00 x Wall>thickness : 2.00 x Length> mm: 840

Start of delivery

Indicator setting
Piston stroke> mm: 1.0
Outlet> : A

Injection-pump setting values
Test specifications in parentheses

Timing-device travel

Speed 1/min: 1250

Setting value mm: 3.10...3.50

Shutoff

electromagnet>Volt: 12

Supply-pump pressure

Speed 1/min: 1250

Setting value bar: 5.70...6.30

Shutoff

electromagnet>Volt: 12

Full-load del. w/out charge press.:

Speed 1/min: 1250

Del. quantity cm3/

> 1000s.: 35.50...36.50

Shutoff

electromagnet>Volt: 12 Dispersion cm3/: 2.0 > 1000s.: (3.0)

Residual-Delivery Setting

Speed 1/min: 550

Del. quantity cm3/

> 1000s.: 2.00...3.00

Shutoff

electromagnet Volt: 12

Full-load speed regulation

Speed 1/min: 2400

Del. quantity cm3/

> 1000s.: 10.00...14.00

Shutoff

electromagnet>Volt: 12

Start:

Speed 1/min: 100

Del. quantity cm3/: 35.00...85.00

mind> 1000s.: 35.00

Shutoff

electromagnet>Volt: 12

Load-dependent start of delivery:

Inj.-qty.dif.measurement:

Speed 1/min: 1250

Inj.-qty. cm3/

difference> 1000S.: 5.00...11.00

Shutoff

electromagnet>Volt: 12 TD-travel dif.measurement

1. Speed 1/min: 1250

TD-travel

difference> mm: 0.30...0.50

Shutoff

electromagnet>Volt: 12
SP press.-dif.measurement

1. Speed 1/min: 1250

L23

Supply pump	+
pressure>	Delivery-quant. and breakaway char.:
difference> bar: 0.500.90	+
Shutoff	t
electromagnet Volt: 12	+ 3rd speed 1/min: 2650 + Shutoff
Inspection-pump test specifications	+ electromagnet>Volt: 12
Test specifications in parentheses	Del. quantity cm3/: 0.006.00
	+ > 1000s.: (0.006.00)
Timing-device characteristic:	5th speed 1/min: 2400
2nd speed 1/min: 1700	electromagnet>Volt: 12
TD travel mm: 5.005.80	Del. quantity cm3/: 10.0014.00
> mm: (4.706.10)	> 1000s.: (8.0016.00)
Shutoff	8th speed 1/min: 2250
electromagnet>Volt: 12	Shutoff
3rd speed 1/min: 1250	
	electromagnet>Volt: 12
	Del. quantity cm3/: 18.0028.00
(2:00:1:1:00)	> 1000s.: (17.0029.00)
Shutoff	9th speed
electromagnet>Volt: 12	Shutoff
4th speed 1/min: 750 -	electromagnet>Volt: 12
TD travel mm: 1.001.80	+ Del. quantity cm3/: 32.0034.00
> mm: (0.702.10) -	+ > 1000s.: (30.8035.20)
Shutoff -	† 10th speed 1/min: 500
electromagnet>Volt: 12	- Shutoff
_	electromagnet>Volt: 12
Supply-pump pressure characteristic:	Del. quantity cm3/: 29J34.50
-	> 1000s.: (27.0037.00)
1st speed	12th speed 1/min: 1250
•	Shutoff
Supply-pump - pressure> bar: 7.107.70 -	· t
	electromagnet>Volt: 12
	Del. quantity cm3/: 35.5036.50
Shutoff	> 1000s.: (33.8038.20)
electromagnet>Volt: 12	20th speed 1/min: 750
2nd speed	Shutoff
Supply-pump -	electromagnet>Volt: 12
pressure> bar: 5.706.30 -	Del. quantity cm3/: 30.5033.50
> bar: (5.506.50)	> 1000s.: (29.0035.00)
Shutoff	-
electromagnet>Volt: 12	}
3rd speed	
Supply-pump	Electr. shutoff:
pressure> bar: 4.505.10	-
> bar: (4.305.30)	- 1st speed 1/min: 425
Shutoff	Del. quantity cm3/: 0.003.00
electromagnet>Volt: 12	- > 1000s.: (0.003.00)
eteet onagnees vott. 12	- Shutoff
Overiow quantity at overflow valve:	- electromagnet>volt: -
over the quantity at over tow valve.	etectrollagnet/vott.
1-4 1	Names and the c
1st speed 1/min: 750	- Damper set qty.:
Shutoff	F
electromagnet>Volt: 12	- LFG-setting:
Overflow : 41.7083.40	
quantity> cm3/10s: (26.8098.30)	- Idle delivery:
2nd speed 1/min: 1850	
Shutoff +	- 1st speed 1/min: 425
electromagnet>Volt: 12	- Shutoff
Overflow : 55.60138.90	- electromagnet Volt: 12
$\frac{1}{2}$ $\frac{1}$	- Del quantity cm3/. 7 00 9 00

> 1000s.: (4.00...12.00) electromagnet>Volt: 12 Del. quantity cm3/: 35.00...85.00 High Idle: 1000s.: (35.00...85.00) 1/mi: 500 1st speed 1/min: 380 2nd speed Shutoff Shutoff electromagnet>Volt: 12 electromagnet>Volt: 12 Del. quantity cm3/: 7.00...9.00 > 1000s.: 4.00...12.00) Del. quantity cm3/: 18.00...38.00 1000s.: (18.00...38.00) 1/min: 100 Rest delivery: 4th speed Shutoff 1/min: 550 1st speed electromagnet>Volt: 12 Del. quantity cm3/: 35.00...85.00 Shutoff 1000s.: (35.00...85.00) electromagnet>Volt: 12 Del. quantity cm3/: 2.00...3.00 > 1000s.: (0.50...4.50)
2nd speed 1/min: 500 Shutoff electromagnet: Shutoff Cut-in electromagnet Volt: 12 >min voltage : 10.0 Del. quantity cm3/: 2.50...4.50 Rated voltage : 12.0 1000s.: (1.00...6.00) Mounting and assembly dimensions: Load-dependent start of delivery: Ini.-qty.dif.measurement: Designation mm: 3.2...3.4 mm: 5.1 ..5.5 3rd speed 1/min: 1250 **KF** cm3/: 5.00...11.00 mm: 1.2...1.5 Inj.-qty. MS difference> 1000s.: (4.00...12.00) SVS max. mm: 4.5 mm: 17.0...19.0 Shutoff XK electromagnet>Volt: 12 mm: 10.6...14.0 XL 1/min: 1250 5th speed cm3/: 0.00...3.00 Inj.-qty. Remarks: difference> 1000S.: (0.00...3.00) : Shutoff electromagnet>Volt: 12 TD-travel dif.measurement: correttore anticipo iniezione (SV): 1/min: 1250 1st speed TD-travel : 0.30...0.50 mm: (0.30...0.50) difference> Shutoff electromagnet>Volt: 12 1/min: 1250 3rd speed : 0.70...1.10 TD-travel difference> mm: (0.40...1.40) Shutoff electromagnet>Volt: 12 3rd speed 1/min: 1250 Supply pumppressure > : 0.50...0.90 difference> bar: (0.30...1.10) Shutoff electromagnet>Volt: 12 Automatic starting fuel delivery: 1/min: 180 1st speed

Shutoff

AFB/AFB BOSCH-INJ.-PUMP TEST SPECIFICATIONS valve > Volt: 12.0 Shutoff Note inst. in remarks column electromagnet>Volt: 12.0 Test scheet : FORD Supply-pump pressure Edition : 09.08.95 replaces 1/min: 1500 Speed Calibrating oil : ISO-4113 Setting value bar: 6.40...7.00 KS8/AFE Injection pump : VE4/8F2400R615 valve > Volt: 12.0 : 0 460 484 079 Type number Shutoff Customer Part-No. : electromagnet>Volt: 12.0 Full-load del. w/out charge press.: Customer-specific information Customer : FORD Speed 1/min: 1750 Del. quantity cm3/ Engine : 1.8 IDI 1000s.: 31.0...31.4 KSB/AFB 11 TEST BENCH REQUIREMENTS valve > Volt: 12.0 Shutoff Overflow restricti: 1 463 456 303 electromagnet>Volt: 12.0 cm3/: 2.0 Dispersion Calibrating oil 1000s.: (3.0) return>temp. > °C with>thermometer> : 40.00...48.00 Residual-Delivery Setting Electronically> : 42.00...50.00 Speed 1/min: 530 Inlet press., bar: 0.30...0.40 Dei. quantity cm3/ 1000s.: 0.20...5.80 > Calibrating nozzle-holder KSB/AFB assembly> : 1 688 901 022 valve > Volt: 12.0 Shutoff Opening | electromagnet Volt: 12.0 bar: 130.00...133.00 Pressure> Dispersion cm3/: 2.0 1000s.: (2.5) Test inj. tubing : 1 680 750 073 Full-load speed regulation Outside diameter : 6.00 Speed 1/min: 2625 x Wall>thickness : 2.00 Del. quantity cm3/ 1000s.: 9.50...15.50 x Length> mm: 450 KSB/AFB Start of delivery valve > Volt: 12.0 Shutoff Prestroke mm: -(from BDC): electromagnet>Volt: 12.0 Start of delivery block Start: Piston stroke mm: 0.85 mm: +-0.02(0.05)1/min: 100 Speed Outlet > ; B Del. quantity cm3/: 50.00...70.00 mind> 1000s.: 50.00 KSB/AFB Injection pump setting values > Volt: 12.0 Test specifications in parentheses Valve Shutoff Timing-device travel electromagnet>Volt: 12.0 1/min: 1500 Load-dependent start of delivery:

Inj.-qty.dif.measurement:

Setting value mm: 6.50...6.90

	+ 1st sp	eed 1/min:	750
Speed 1/min: 1200	+ Supply	-pu m p	
Injqty. cm3/	+ pressu	re> bar:	4.104.70
difference> 1000s.: -5.213.2 *	+ KSB/AF		
KSB/AFB		> Volt:	12.0
valve > Volt: 12.0	Shutof		
Shutoff		omagnet>Volt:	12 0
electromagnet>Volt: 12.0		eed 1/min:	
TD-travel dif.measurement			1500
TO-travet arraneasurement	+ Supply		((0 7.00
4.000.00		re> bar:	6.407.00
1. Speed 1/min: 1200	+ KSB/AFI		40.0
TD-travel		> Volt:	12.0
difference> mm: -1.51.7 ★	+ Shutof		
KSB/AFB	+ electro	omagnet>Volt:	12.0
valve > Volt: 12.0	+ 3rd spe	eed 1/min:	2000
Shutoff	+ Supply	-pump	
electromagnet>Volt: 12.0		re> bar:	7.908.50
3	+ KSB/AFE		
Inspection-pump test specifications		> Volt:	12 0
Test specifications in parentheses	Shutof		12.0
rest specifications in parentneses		omagnet>Volt:	12.0
Timing doving characteristics	T electri	magnet/voct:	12.0
Timing-device characteristic:	1 0		
4-1	+ overtor	w quantity at	overflow valve:
1st speed 1/min: 400	†		****
TD travel mm: 3.43.6	+ 1st spe		750
> mm: (2.54.5)	+ KSB/AFE		
KSB/AFB	+ valve	> Volt:	12.0
valve > Volt: -	+ Shutoff	f	
electromagnet>Volt: 12.0		omagnet>Volt:	12.0
2nd speed 1/min: 1000	Overflo	nw :	41.7083.40
TD travel mm: 2.805.20			(26.8097.40)
> mm: (2.705.30)		eed 1/min:	
KSB/AFB	+ KSB/AFE		2200
valve > Volt: -		> Volt:	12.0
			12.0
Shutoff	+ Shutoff		42.0
electromagnet>Volt: 12.0	+ electro	omagnet>Volt:	12.0
3rd speed 1/min: 800			55.60152.90
TD travel mm: 2.803.60	+ quantit	:y> cm3/10s:	(41.60152.90)
> mm: (2.404.00)	+		
KSB/AFB	+ Deliver	y-quant. and	breakaway char .:
valve > Volt: 12.0	+		
Shutoff	+		
electromagnet>Volt: 12.0	1nd spe	ed 1/min:	2950
4th speed 1/min: 1500	+ KSB/AFE		-
TD travel mm: 6.506.90	+ valve	> Volt:	12.0
> mm: (6.007.40)	+ Shutoff		.2.0
KSB/AFB		magnet>Volt:	12 0
valve > Volt: 12.0		uantity cm3/:	
Shutoff] > qu		(0.002.00)
electromagnet>Volt: 12.0	+ 2nd spe		2025
5th speed 1/min: 2000	+ KSB/AFB		42.0
TD travel mm: 8.409.20	+ valve	> Volt:	12.0
> mm: (8.009.60)	+ Shutoff		
KSB/AFB		magnet Volt:	
valve > Volt: 12.0	+ Del. qu	mantity cm3/:	
Shutoff	+ >	1000s.:	(8.0017.0)
electromagnet>Volt: 12.0	+ 3rd spe	ed 1/min:	2550
	+ KSB/AFB		
Supply-pump pressure characteristic:	valve	> Volt:	12.0
Service & Transfer to Second Control and Second Control	+ Shutoff		

electromagnet>Volt: 12.0 +	1st speed 1/mi: 570
Del. quantity cm3/: 15.023.0 +	KSB/AFB
> 1000s.: (13.025.0) +	valve > Volt: 12.0
4th speed 1/min: 2400 +	Shutoff
KSB/AFB +	electromagnet>Volt: 12.0
valve > Volt: 12.0 +	Del. quantity cm3/: 11.015.00
Shutoff	> 1000s.: (9.0017.00)
electromagnet>Volt: 12.0	7 10003 (7.0017.007
	Deat del Service
Del. quantity cm3/: 25.127.1 +	Rest delivery:
> 1000s.: (24.128.1) +	
5th speed 1/min: 1750 + KSB/AFB	1st speed 1/min: 500 KSB/AFB
valve > Volt: 12.0	valve > Volt: 12.0
Shutoff	Shutoff
electromagnet>Volt: 12.0	electromagnet>Volt: 12.0
Del. quantity cm3/: 31.031.40	
	Del. quantity cm3/: 0.205.80
> 1000s.: (29.532.90) +	> 1000s.: (0.205.80)
6th speed 1/min: 1000 + KSB/AFB	Load-dependent start of delivery:
valve > Volt: 12.0 +	Injqty.dif.measurement:
Shutoff	
electromagnet>Volt: 12.0	1st speed 1/min: 1200
Del. quantity cm3/: 28.731.7	Inj.—qty. cm3/ : -5.07.0 "
> 1000s.: (27.932.5)	difference> 1000s.: -
7th speed 1/min: 750 +	KSB/AFB
KSB/AFB +	valve > Volt: 12.0
valve > Volt: 12.0	Shutoff
Shutoff	electromagnet>Volt: 12.0
electromagnet>Volt: 12.0	2nd speed 1/min: 1250
Del. quantity cm3/: 28.531.5	Injqty. cm3/: 2.08.0 Z'
> 1000s.: (27.732.3)	
7 10005.: (27.752.5)	difference> 1000S.: -
. †	KSB/AFB
+	valve > Volt: 12.0
+	Shutoff
Electr. shutoff:	electromagnet Volt: 12.0
1	•
1st speed 1/min: 425	TD-travel dif.measurement:
Del. quantity cm3/: 0.003.00	correttore anticipo iniezione (SV):
1000011 101001	1st speca 1/min: 1200
Shutoff	TD-travel : -1.72.5 '
electromagnet>volt: -	difference> mm: -
KSB/AFB +	KSB/AFB
valve > Volt: 12.0 +	valve > Volt: 12.0
<u> </u>	Shutoff
Damper set qty.:	electromagnet>Volt: 12.0
1	
LFG-setting:	SP pressdif.measurement:
	pompa di mandata (FP):
Talla alalifuanus	
Idle delivery:	1st speed 1/min: 1200
†	Supply pump-
1st speed	pressure > : -0.10.3 "
KSB/AFB +	difference> bar: -
valve > Volt: 12.0 +	KSB/AFB
Shutoff	valve > Volt: 12.0
electromagnet Volt: 12.0	Shutoff
Del. quantity cm3/: 6.0010.0 +	electromagnet>Volt: 12.0
> 1000s.: (4.0012.00)	Acceptance Advisory and the Company of the Company
(+	Automatic starting fuel delivery:
High Idle: +	
ì	1st speed 1/min: 200

KSB/AFB > Volt: 12.0 valve Shutoff electromagnet>Volt: 12.0 Del. quantity cm3/: 50.00...80.00 1000s.: LFG/LL VH-VL 1/min: 500 2nd speed KSB/AFB > Volt: 12.0 valve Shutoff electromagnet>Volt: 12.0 Del. quantity cm3/: 24.00...36.00 1000s.: LFG/LL VH-VL 1/min: 275 3rd speed KSB/AFB valve > Volt: 12.0 Shutoff electromagnet>Volt: 12.0 Del. quantity cm3/: 50...80 VH/VL 1000s.: LFG/ERHOHTER LL 4th speed 1/min: 100 KSB/AFB Volt: 12.0 valve Shutoff electromagnet>Volt: 12.0 Del. quantity cm3/: 50...70 VH/VL 1000s.: LFG ERHOHTER LL Shutoff electromagnet: Cut-in >min voltage : 10.0 : 12.0 Rated voltage Mounting and assembly dimensions: Designation mm: 3.2...3.4 K KF mm: KOT MS mm: 2.1...2.3 mm: 31.6...35.6 Ya mm: 62.9...71.5 Yb Remarks: Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control Lever on drive end Yb = Distance between VE flange and speed-control lever in rated speed

Measurement point = edge of control

lever on distributor-head end

Z = Absolute delivery

MO1

position

1/min: 1500 Speed BOSCH-INJ.-PUMP TEST SPECIFICATIONS mm: 5.40...5.80 Setting value AFB/AFB Note inst. in remarks column valve Volt: -Shutoff Test scheet : FORD electromagnet>Volt: 12.0 Edition : 09.08.95 replaces Supply-pump pressure : ISO-4113 Calibrating oil 1/min: 1500 Speed Infection pump : VE4/8F2400R622 Setting value bar: 6.50...7.10 Type number : 0 460 484 081 KSB/AFB Customer Part-No. : valve > Volt: -Shutoff electromagnet>Volt: 12.0 Customer-specific information Customer : FORD Full-load del. w/out charge press.: : 1.8IDI Engine 1/min: 1500 Speed Del. quantity cm3/ KW: 44 1000s.: 28.8...29.2 Power 11 KSB/AFB TEST BENCH REQUIREMENTS Volt: valve Shutoff Overflow restricti: 1 463 456 303 electromagnet>Volt: 12.0 cm3/: 2.0 Dispersion Calibrating-oil 1000s.: (3.0) return>temp. > °C with>thermometer> : 40.00...48.00 Residual-Delivery Setting Electronically> : 42.00...50.00 1/min: 500 Speed Inlet press., bar : 0.30...0.40 Del. quantity cm3/ 1000s.: 2.50...3.5u Calibrating nozzle-holder KSB/AFB assembly> : 1 688 901 022 valve > Volt: -Shutoff Opening | electromagnet Volt: 12.0 bar: 130.00...133.00 Pressure> Full-load speed regulation Test inj. tubing : 1 680 750 073 1/min: 2550 Speed Del. quantity cm3/ Outside diameter : 6.00 1000s.: 17.0...23.0 x Wall>thickness : 2.00 KSB/AFB x Length> mm: 450 valve > Volt: -Shutoff Start of delivery electromagnet>Volt: 12.0 Prestroke mm: -(from BDC): -Start: Start of delivery block 1/min: 100 Speed Piston stroke mm: 0.85 Del. quantity cm3/: 50.00...70.00 1000s.: 50.00 mm: +-0.02(0.05)mind> Outlet > : B KSB/AFB > Volt: -Valve Shutoff Injection pump setting values Test specifications in parentheses electromagnet>Volt: 12.0 Timing-device travel Load-dependent start of delivery:

Inj.-qty.dif.measurement:

	+	1st speed 1/min: 750
Speed 1/min: 1200	+	Supply-pump
Inj.—qty. cm3/	+	pressure> bar: 4.304.90
difference> 1000s.: -6.610.4 *	+	KSB/AFB
KSB/AFB	+	valve > Volt: -
valve > Volt: -	+	Shutoff
Shutoff	+	electromagnet>Volt: 12.0
electromagnet>Volt: 12.0	+	2nd speed 1/min: 1500
TD-travel dif.measurement	+	Supply-pump
	+	pressure> bar: 6.57.1
1.Speed 1/min: 1200	+	KSB/AFB
TD-travel	+	valve > Volt: -
difference> mm: - 0.70.9 *	+	Shutoff
KSB/AFB	+	electromagnet>Volt: 12.0
valve > Volt: -	+	3rd speed 1/min: 2400
Shutoff	+	Supply-pump
electromagnet>Volt: 12.0	+	pressure> bar: 9.09.60
	+	KSB/AFB
Inspection-pump test specifications	+	<pre>valve > Volt: ~</pre>
Test specifications in parentheses	+	Shutoff
	+	electromagnet>Volt: 12.0
Timing device characteristic:	+	
	+	Overlow quantity at overflow valve:
1st speed 1/min: 400	+	
TD travel mm: 2.72.9	+	1st speed 1/min: 450
> mm: (1.83.8)	+	KSB/AFB
KSB/AFB	+	valve > Volt: -
valve > Volt: 12.0	+	Shutoff
electromagnet>Volt: 12.0	+	electromagnet>Volt: 12.0
2nd speed 1/min: 1000	+	Overflow : 41.7083.40
TD travel mm: 3.505.90	+	quantity> cm3/10s: (27.7097.40)
> mm: (3.406.00)	+	2nd speed 1/min: 2400
KSB/AFB	+	KSB/AFB
valve > Volt: 12.0	+	valve > Volt: -
Shutoff	+	Shutoff
electromagnet>Volt: 12.0	+	electromagnet>Volt: 12.0
3rd speed 1/min: 800	+	Overflow : 55.60152.90
TD travel mm: 1.62.4	+	quantity> cm3/10s: (40.60167.90)
> mm: (1.22.8)	+	
KSB/AFB	+	Delivery-quant. and breakaway char.:
valve > Volt: -	+	
Shutoff	+	
electromagnet>Volt: 12.0	+	1nd speed 1/min: 2950
4th speed 1/min: 1500	+	KSB/AFB
TD travel mm: 5.45.8	+	valve > Volt: -
> mm: (4.96.3)	+	Shutoff
KSB/AFB	+	electromagnet>Volt: 12.0
valve > Volt: -	+	Del. quantity cm3/: 0.002.00
Shutoff	Ť	> 1000s.: (0.002.00)
electromagnet>Volt: 12.0	+	2nd speed 1/min: 2625
5th speed 1/min: 2400	+	KSB/AFB
TD travel mm: 9.19.9	+	valve > Volt: -
> mm: (8.710.3)	+	Shutoff
KSB/AFB	+	electromagnet Volt: 12.0
valve > Volt: -	+	Del. quantity cm3/: 9.5017.5
Shutoff	+	> 1000s.: (7.5019.5)
electromagnet>Volt: 12.0	+	3rd speed 1/min: 2550
	+	KSB/AFB
Supply-pump pressure characteristic:	+	valve > Volt: -
	+	Shutoff

electromagnet>Volt: 12.0	→ Shutoff
Del. quantity cm3/: 17.023.0	+ electromagnet Volt: 12
> 1000s.: (15.524.5)	+ Del. quantity cm3/: 7.009.0
4th speed 1/min: 2400 KSB/AFB) 1000s.: (4.012.0)
<pre>valve > Volt: - Shutoff</pre>	High Idle:
electromagnet>Volt: 12.0	1st speed 1/mi: 525
Del. quantity cm3/: 28.330.3	KSB/AFB
> 1000s.: (27.331.3)	Valve > Volt: -
5th speed 1/min: 1500	Shutoff
KSB/AFB	+ electromagnet>Volt: 12.0
valve > Volt: - Shutoff	+ Del. quantity cm3/: 12.014.00 + > 1000s.: (9.017.0)
electromagnet>Volt: 12.0	+
Del. quantity cm3/: 28.829.2	+ Rest delivery:
> 1000s.: (27.331.7)	+
6th speed 1/min: 1000	1st speed 1/min: 500
KSB/AFB	+ KSB/AFB
<pre>valve > Volt: - Shutoff</pre>	<pre>+ valve > Volt: - + Shutoff</pre>
electromagnet>Volt: 12.0	+ electromagnet>Volt: 12.0
Del. quantity cm3/: 27.830.8	+ Del. quantity cm3/: 2.53.5
> 1000s.: (27.031.6)	+ > 1000s.: (0.25.8)
7th speed 1/min: 750 KSB/AFB	Load-dependent start of delivery:
valve > Volt: -	Injqty.dif.measurement:
Shutoff	Ting. qcy.arr.medsaremen.
electromagnet>Volt: 12.0	T 1st speed 1/min: 1200
Dol guardity on 7/2 24 0 20 0	
Del. quantity cm3/: 26.929.9	+ Injqty. cm3/ : -8.410.4 "
> 1000s.: (26.130.7)	+ difference> 1000s.: -
8th speed 1/min: 450	+ KSB/AFB
KSB/AFB	+ valve > Volt: -
valve > Volt: -	+ Shutoff
Shutoff	+ electromagnet>Volt: 12.0
electromagnet>Volt: 12.0	+ 2nd speed 1/min: 1200
Del. quantity cm3/: 29.533.5	+ Injqty. cm3/: 2.08.0 Z'
> 1000s.: (28.734.3)	+ difference> 1000S.: -
	+ KSB/AFB
	+ valve > Volt: -
	+ Shutoff
Electr. shutoff:	+ electromagnet Volt: 12.0
	+ 3rd speed 1/min: 1200
1st speed 1/min: 425	+ Charge press. hPa: ALFB
Del. quantity cm3/: 0.003.00	+ Injqty. cm3/: 2.08.0 Z*
> 1000s.: (0.003.00)	+ difference> 1000s.: -
Shutoff	+ KSB/AFB
electromagnet>volt: -	+ valve > Volt: 12.0
KSB/AFB	Shutoff
valve > Volt: -	electromagnet>Volt: 12.0
	†
Damper set qty.:	+ TD-travel dif.measurement:
	+ correttore anticipo iniezione (SV)
LFG-setting:	+ 1st speed 1/min: 1200
	+ TD-travel : -0.61.4 '
Idle delivery:	+ difference> mm: -
·	+ KSB/AFB
1st speed 1/min: 450	+ valve > Volt: -
KSB/AFB	+ \$hutoff
valve > Volt: -	+ electromagnet>Volt: 12.0

2nd speed 1/min: 1200 1000s.: LFG/LL VH-VL Charge press. hPa: ALFB TD-travel : 0.0...0.6 Z* 1/min: 275 3rd speed difference> mm: -KSB/AFB KSB/AFB valve > Volt: valve > Volt: 12.0 Shutoff Shutoff electromagnet>Volt: 12.0 electromagnet>Volt: 12.0 Del. quantity cm3/: 50...70 VH-VL 1000s.: LFG/ERHOHTER LL SP press.—dif.measurement: pompa di mandata (FP): 1/min: 500 4th speed 1st speed 1/min: 1200 KSB/AFB Supply pump-Volt: valve pressure > : -0.1...0.3 " Shutoff difference> bar: electromagnet>Volt: 12.0 KSB/AFB Del. quantity cm3/: 26...38 VH-VL valve Volt: -1000s.: LFG/ERHÖHTER LL Shutoff electromagnet>Volt: 12.0 Shutoff electromagnet: Part-load del.at 3rd inj.-gty. Cut-in terza fermo della portata >min voltage : 10.0 stop (EGR set) Rated voltage : 12.0 scarico) (ARF) gaz d'échappement-ARF) Mounting and assembly dimensions: Spacing mm: 12.0 Designation 1/min: 1250 mm: 3.2...3.4 1st speed Charge press. hPa: ARF1 KF mm: KOT KSB/AFB mm: 1.6...1.9 MS valve > Volt: mm: 29.4...33.4 Ya mm: 63.5...72.5 Shutoff Yb electromagnet>Volt: 12.0 Del. quantity cm3/: 19.5...20.5 Ajustement Potentiometer: 1000s.: (27.5...22.5) 1/min: 600 2nd speed Angle for °: 25.0 Charge press. hPa: ARF2 pot. KSB/AFB Supply voltage > Volt: pot. > volt: 5.0 valve Shutoff electromagnet>Volt: 12.0 Remarks: Del. quantity cm3/: 9.5...10.5 : ARF1= 3.55 VOLT 1000s.: (7.5...12.5) : ARF2 = 1.85 VOLT Ya = Distance between VE flange and Automatic starting fuel delivery: speed-control lever in idle position 1/min: 500 Measurement point = edge of control 1st speed Lever on drive end KSB/AFB Volt: valve Shutoff electromagnet>Volt: 12.0 Del. quantity cm3/: 24.00...36.00 Yb = Distance between VE flange and speed-control lever in rated speed 1000s.: LFG/LL VH-VL position Measurement point = edge of control 1/min: 200 lever on distributor-head end 2nd speed KSB/AFB valve Volt: -Shutoff electromagnet>Volt: 12.0

Del. quantity cm3/: 50.0...70.0

Shutoff BOSCH-INJ.-PUMP TEST SPECIFICATIONS electromagnet>Volt: 12 Note inst. in remarks column Supply-pump pressure Test scheet : VW Speed 1/min: 1250 Edition : 09.08.95 Setting value bar: 5.40...6.00 replaces Shutoff Calibrating oil : ISO-4113 electromagnet>Volt: 12 : VE4/8F2200R574-1 Injection pump Full-load del. w/out charge press.: : 0 460 484 101 Type number Customer Part-No. : 1/min: 1250 Speed Del. quantity cm3/ 1000s.: 33.0...34.0 > Customer-specific information Shutoff Customer electromagnet>Volt: 12.0 Dispersion cm3/: 2.0: 1.9 L SD Engine 1000s.: (3.0) TEST BENCH REQUIREMENTS Residual-Delivery Setting Overflow restricti: 1 463 456 303 1/min: 520 Speed Del. quantity cm3/ 1000s.: 6.00...8.00 Calibrating-oil return>temp. > °C Shutoff with>thermometer> : 40.00...48.00 electromagnet Volt: 12 Electronically> : 42.00...50.00 Full-load speed regulation Inlet press., bar: 0.30...0.40 1/min: 2525 Speed Calibrating nozzle-holder Del. quantity cm3/ : 1 688 901 111 assembly> 1000s.: 8.50...12.50 Shutoff electromagnet>Volt: 12 Opening bar: 147.00...150.00 Pressure> Start: Test inj. tubing : 1 680 750 073 1/min: 100 Del. quantity cm3/: 40.00...66.00 Outside diameter : 6.00 mind> 1000s.: 40.00 x Wall>thickness : 2.00 Shutoff x Length> mm: 450 electromagnet>Volt: 12 Start of delivery Inspection-pump test specifications Prestroke Test specifications in parentheses mm: -(from BDC): -Timing-device characteristic: Start of delivery block Piston stroke mm: 0.9 1st speed 1/min: 750 mm: +-0.02(0.06)mm: 3.10...3.90 > TD travel Outlet > mm: (2.80...4.20) electromagnet>Volt: 12.0 Injection-pump setting values 2nd speed 1/min: 1250 Test specifications in parentheses TD travel mm: 5.10...5.50 mm: (4.60...6.00) Timing-device travel Shutoff electromagnet>Volt: 12 3rd speed 1/min: 2000 1/min: 1250 Speed

mm: 7.5...8.3

TD travel

Setting value mm: 5.10...5.50

> mm: Shutoff electromagnet>Volt:	(7.28.6)	† † †	electromagnet>Volt: 12.0 Del. quantity cm3/: 33.034.0 > 1000s.: (31.335.7)
Supply-pump pressur	re characteristic:	Ī	7th speed 1/min: 750 Shutoff electromagnet>Volt: 12.0
1st speed 1/min: Supply-pump	750	Ī	Del. quantity cm3/: 32.535.5 > 1000s.: (31.037.0)
pressure> bar: Shutoff	4.004.60	1	8th speed 1/min: 400 Shutoff
electromagnet>Volt: 2nd speed 1/min: Supply-pump	12 1250	‡	electromagnet>Volt: 12 Del. quantity cm3/: 34.540.5 > 10008:: (32.043.0)
pressure> bar: Shutoff	5.406.00	‡	
electromagnet>Volt: 3rd speed 1/min: Supply-pump		‡	Electr. shutoff:
pressure> bar: Shutoff	7.307.90	+	1st speed 1/min: 450 Del. quantity cm3/: 0.003.00
electromagnet>Volt: Overlow quantity at		Ī	> 1000s.: (0.003.00) Shutoff electromagnet>volt: -
1st speed 1/min:		+	Damper set qty.:
Shutoff electromagnet>Volt:	12	‡	LFG-setting:
Overflow : quantity> cm3/10s: 2nd speed 1/min:		‡	Idle delivery:
Shutoff electromagnet>Volt:	12	+	1st speed 1/min: 450 Shutoff
Overflow : quantity> cm3/10s:	55.60152.90 (41.70152.90)	<u>†</u>	electromagnet Volt: 12 Del. quantity cm3/: 8.5010.5 > 1000s.: (5.5013.50)
Delivery-quant. and	breakaway char.:	<u> </u>	High Idle:
2nd speed 1/min: Shutoff	2675	Ī	1st speed 1/mi: 525 Shutoff
<pre>electromagnet Volt: Del. quantity cm3/: > 1000S.: 3rd speed 1/min:</pre>	0.003.00 (0.003.00)	+++++++++++++++++++++++++++++++++++++++	electromagnet>Volt: 12 Del. quantity cm3/: 8.5010.50 > 1000s.: (5.5013.50)
Shutoff electromagnet>Volt:		Ŧ	Rest delivery:
Del. quantity cm3/:		‡	1st speed 1/min: 525 Shutoff
4th speed 1/min: Shutoff		+	electromagnet>Volt: 12 Del. quantity cm3/: 6.008.00 > 1000S.: (3.011.0)
	22.032.0 (21.033.0)	Ī	Automatic starting fuel delivery:
5th speed 1/min: Shutoff		‡	1st speed 1/min: 180
electromagnet>Volt: Del. quantity cm3/: > 1000S.: 6th speed 1/min: Shutoff	34.035.00 (31.837.20)	+++++++++++++++++++++++++++++++++++++++	Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 40.0074.00 > 1000S.: (40.0074.00

4th speed 1/min: 100

Shutoff

electromagnet>Volt: 12

Del. quantity cm3/: 40.00...66.00 > 1000s.: (40.00...66.00)

Shutoff electromagnet:

Cut-in

>min voltage : 10.0 Rated voltage : 12.0

Mounting and assembly dimensions:

Designation

K mm: 3.2...3.4 kF mm: 5.7 MS mm: 1.1...1.5 Ya mm: 36.0...40.0 Yb mm: 47.7...57.3

Remarks:

Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end

Yb = Distance between VE flange and Speed-control lever in rated speed position
Measurement point = edge of control lever on distributor-head end

BOSCH-INJ.-PUMP TEST SPECIFICATIONS Note inst. in remarks column Test scheet : VW Edition : 08.08.95 replaces Calibrating oil : ISO-4113 Injection pump : VE5/8F2100L545-2 : 0 460 485 029 Type number Customer Part-No. : Customer-specific information Customer : VW Engine : 2.4 L SDT4/SG TEST BENCH REQUIREMENTS Overflow restricti: 1 463 456 303

Calibrating-oil return>temp. > °C with>thermometer> : 40.00...48.00 Electronically> : 42.00...50.00

Inlet press., bar: 0.30...0.40

Calibrating nozzle-holder : 1 688 901 000 assembly>

Opening bar: 147.00...150.00 Pressure>

Test inj. tubing : 1 680 750 017

Outside diameter : 6.00 x Wall>thickness : 2.00 mm: 840 x Length>

Start of delivery Prestroke mm: -(from BDC): -

Injection-pump setting values Test specifications in parentheses

Timing-device travel

1/min: 1250 Setting value mm: 2.20...2.60 Shutoff

electromagnet>Volt: 12

Supply-pump pressure

1/min: 1250 beed Setting value bar: 5.70...6.30 electromagnet>Volt: 12 Full-load del. w/out charge press.:

1/min: 1250 Speed Del. quantity cm3/

1000s.: 36.0...37.0

Shutoff

electromagnet>Volt: 12.0 Dispersion cm3/: 2.01000s.: (3.0)

Residual-Delivery Setting

1/min: 540 Del. quantity cm3/

1000s.: 6.50...7.50

Shutoff

electromagnet Volt: 12

Full-load speed regulation

1/min: 2400

Del. quantity cm3/

1000s.: 10.J...14.00

Shutoff

electromagnet>Volt: 12

Start:

1/min: 100 Speed

Del. quantity cm3/: 35.00...85.00

1000s.: 35.00 mind>

Shutoff

electromagnet>Volt: 12

Load-dependent start of delivery: Inj.-qty.dif.measurement:

1/min: 1500 Speed

Inj.-qty. cm3/

difference> 1000s.: -3.50...9.50 *

electromagnet>Volt: 12 TD-travel dif.measurement

1/min: 1500 1.Speed

TD-travel

difference> mm: -0.3...0.5 *

Shutoff

electromagnet>Volt: 12

Inspection-pump test specifications Test specifications in parentheses

Timing-device characteristic:

2nd speed	+ electromagnet>Volt: 12 + Del. quantity cm3/: 10.0014.00
> mm: (4.706.10)	+ > 1000s.: (8.0016.00)
Shutoff	+ 8th speed 1/min: 2300
electromagnet>Volt: 12	+ Shutoff
3rd speed 1/min: 1250	<pre>+ electromagnet>Volt: 12</pre>
TD travel mm: 2.202.60	+ Del. quantity cm3/: 17.0027.00
> mm: (1.703.10)	+ > 1000s.: (26.0028.00)
Shutoff	+ 9th speed 1/min: 2100
electromagnet>Volt: 12	+ Shutoff
4th speed 1/min: 1000	+ electromagnet>Volt: 12
TD travel mm: 0.701.50	Del. quantity cm3/: 30.0032.00
> mm: (0.401.80)	+ > 1000s.: (28.8033.20)
Shutoff	+ 12th speed 1/min: 1250
electromagnet>Volt: 12	+ Shutoff
	+ electromagnet>Volt: 12
Supply-pump pressure characteristic:	+ Del. quantity cm3/: 36.0037.00
4	+ > 1000s.: (34.338.7)
1st speed 1/min: 1000	+ 20th speed 1/min: 600
Supply-pump	+ Shutoff
pressure> bar: 5.05.6	+ electromagnet>Volt: 12
> bar: -	+ Del. quantity cm3/: 32.3035.30
Shutoff	+ > 1000s.: (30.8036.80)
electromagnet>Volt: 12.0	Ť
2nd speed 1/min: 1250	†
Supply-pump	Thomas chimages.
pressure> bar: 5.706.30	+ Electr. shutoff:
> bar: -	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Shutoff	+ 1st speed 1/min: 415
electromagnet>Volt: 12	+ Del. quantity cm3/: 0.003.00
3rd speed 1/min: 1790	+ > 1000s.: (0.003.00)
Supply-pump pressure> bar: 7.207.80	+ Shutoff
· ·	+ electromagnet>volt: -
> bar: - Shutoff	T Daman and other
electromagnet>Volt: 12	+ Damper set qty.:
etettrollagriet/vott. 12	LFG-setting:
Overlow quantity at overflow valve:	I Ero-setting.
over tow qualitity at over from vatve.	Idle delivery:
1st speed 1/min: 600	I dde detivery.
Shutoff	I 1st speed 1/min: 415
electromagnet>Volt: 12	+ Shutoff
Overflow : 41.7083.40	+ electromagnet Volt: 12
quantity> cm3/10s: (27.8097.30)	+ Del. quantity cm3/: 7.009.00
2nd speed 1/min: 2100	+ > 1000s.: (4.0012.00)
Shutoff	1
electromagnet>Volt: 12	+ Rest delivery:
Overflow : 55.60152.90	1
quantity> cm3/10s: (40.60167.90)	1st speed 1/min: 540
	+ Shutoff
Delivery-quant. and breakaway char.:	+ electromagnet>Volt: 12
both to y quality and broadlandy of all to	+ Del. quantity cm3/: 6.507.50
	+ > 1000s.: (5.009.00)
2nd speed 1/min: 2600	+ 2nd speed 1/min: 490
Shutoff	Shutoff
electromagnet Volt: 12	electromagnet Volt: 12
Del. quantity cm3/: 0.006.00	Del. quantity cm3/: 6.808.80
> 1000s.: (0.006.00)	+ > 1000s.: (5.3010.30)
5th speed	+
Shutoff	I load-dependent start of delivery:

- 110
Injqty.dif.measurement:
1st speed 1/min: 1500 Injqty. cm3/ : -6.08.0 " difference> 1000s.: - Shutoff
electromagnet>Volt: 12.0 2nd speed 1/min: 1500 Injqty. cm3/: 0.03.0 Z'
Shutoff electromagnet Volt: 12.0
TD-travel dif.measurement: correttore anticipo iniezione (SV): 1st speed
Shutoff electromagnet>Volt: 12
SP pressdif.measurement:
pompa di mandata (FP): 1st speed 1/min: 1500
pressure > : -0.10.3 " difference> bar: - Shutoff
electromagnet>Volt: 12.0 2nd speed 1/min: 1500 Supply numb
Supply pump- pressure > : -0.81.2 ' difference> bar: - Shutoff
electromagnet>Volt: 12.0
Automatic starting fuel delivery:
1st speed 1/min: 180 Shutoff
electromagnet>Volt: 12 Del. quantity cm3/: 35.0085.00 > 1000S.: -
2nd speed 1/min: 380 Shutoff
electromagnet>Volt: 12 Del. quantity cm3/: 17.0037.00 > 1000s.: (17.0037.00)
4th speed 1/min: 100 Shutoff
electromagnet>Volt: 12 Del. quantity cm3/: 35.0085.00 > 1000s.: -
Shutoff electromagnet:
Cut-in

Mounting and assembly dimensions:

Designation

K mm: 3.2...3.4
KF mm: 5.8
MS mm: 1.2...1.6
Ya mm: 32.8...34.8
Yb mm: 60.5...71.5

Remarks:

Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end

Yb = Distance between VE flange and speed-control lever in rated speed position Measurement point = edge of control lever on distributor-head end

>min voltage : 10.0 Rated voltage : 12.0 BOSCH-INJ.-PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test scheet : VMA

Edition : 09.04.92 replaces : 01.85 Calibrating oil : ISO 4113

Injection pump : VE4/9F2150L31-1 Type number : 0 460 494 133

Customer—specific information Customer : MOTORI VM

Engine : HR 488 HT

TEST BENCH REQUIREMENTS

Calibrating-oil return>temp. > °C

with>thermometer> : 40.00...48.00 Electronically> : 42.00...50.00

Inlet press., bar: 0.35

Calibrating nozzle-holder

assembly> : 1 688 901 000

Opening

Pressure> bar: 147.00...150.00

Test inj. tubing : 1 688 901 017

Outside diameter : 6.00 x Wall>thickness : 2.00 x Length> mm: 840

Start of delivery
Prestroke mm: > (from BDC): -

Injection-pump setting values
Test specifications in parentheses

Timing-device travel

Speed 1/min: 1900 Charge press. hPa: 800

Setting value mm: 6,40...6,80

Shutoff

electromagnet>Volt: 12.0

Supply-pump pressure

Speed 1/min: 1900 Charge press hPa: 800 Setting value bar: 5.70...6.30

Shutoff

electromagnet>Volt: 12.0

Full-load del. with charge press.:

Speed 1/min: 1600 Charge press. hPa: 800

Del. quantity cm3/

> 1000s.: 46.50...47.50

Shutoff

electromagnet>Volt: 12.0 Dispersion cm3/: 3,0 > 1000s.: -

Full-load del. w/out charge press.:

Speed 1/min: 600

Del. quantity cm3/

> 1000s.: 31.50...32.50

Shutoff

electromagnet>Volt: 12.0

Low-idle speed regulation

Speed 1/min: 400 Charge press hPa: -Del. quantity cm3/

1000s.: 8.00...12.00

Shutoff

electromagnet>Volt: 12.0 Del. quantity cm3/: 3.0 > 1000s.: -

Full-load speed regulation

Speed 1/min: 2300 Charge press hPa: 800

Del. quantity cm3/

> 1000s.: 27.50...33.50

Shutoff

electromagnet>Volt: 12.0

Start:

Speed 1/min: 100 Charge press hPa: -Del. quantity cm3/: mind> 1000s.: 44.0

Shutoff

electromagnet>Volt: 12.0

Inspection—pump test specifications Test specifications in parentheses

Timing-device characteristic:

1st speed 1/min: 1000 Charge press hPa: 800

TD travel mm: 1.30...2.10

> mm: (1.002.40)	† Del. quantity cm3/: 39.3041.30
electromagnet>Volt: 12.0	+ > 1000s.: (37.6042.00)
2nd speed 1/min: 1900	+ 2nd speed 1/min: 2600
Charge press hPa: 800	+ Charge press. hPa: 800
TD travel mm: 6.406,80 > mm: (5.907.30)	+ Shutoff
Shutoff	+ electromagnet Volt: 12.0 + Del. quantity cm3/: 0.02.0
electromagnet>Volt: 12.0	+ > 1000s.: -
3rd speed 1/min: 2150	3rd speed 1/min: 2450
Charge press hPa: 800	+ Charge press. hPa: 800
TD travel mm: 7.508.30	+ Shutoff
> mm: (7.208.60)	+ electromagnet>Volt: 12.0
Shutoff	+ Del. quantity cm3/: 0.010.0
electromagnet>Volt: 12.0	+ > 1000s.: -
Supply-pump pressure characteristic:	+ 4th speed 1/min: 2300
supply-pulip pressure characteristic:	+ Charge press. hPa: 800 + Shutoff
1st speed 1/min: 400	electromagnet>Volt: 12.0
Charge press. hPa: 800	Del. quantity cm3/: 27.5033.50
Supply-pump	+ > 1000s.: (26.5034.50)
pressure> bar: 2.002.60	+ 5th speed 1/min: 2150
Shutoff	+ Charge press. hPa: 800
electromagnet>Volt: 12.0	+ Shutoff
2nd speed 1/min: 1900	+ electromagnet>Volt: 12.0
Charge press. hPa: 800 Supply-pump	+ Del. quantity cm3/: 40.0043.00 + > 1000s.: (39.243.80)
pressure> bar: 5.706.30	- 6th speed 1/min: 1600
Shutoff	Charge press. hPa: 800
electromagnet>Volt: 12.0	Shutoff
3rd speed 1/min: 2150	+ electromagnet>Volt: 12.0
Charge press. hPa: 800	Del. quantity cm3/: 46.5047.50
Supply-pump	+ > 1000s.: (44.7049.30)
pressure> bar: 6.306.90	+ 7th speed 1/min: 600
Shutoff	+ Charge press. hPa: 270
electromagnet>Volt: 12.0	+ Shutoff + electromagnet>Volt: 12.0
Overlow quantity at overflow valve:	+ Del. quantity cm3/: 39.3041.30
over con quality at over reon varve.	1000s.: (37.6042.00)
1st speed 1/min: 600	+ 8th speed 1/min: 600
Charge press. hPa: -	- Charge press. hPa: -
Shutoff	+ Shutoff
electromagnet>Volt: 12.0	+ electromagnet>Volt: 12.0
Overflow : 42.0083.00	+ Del. quantity cm3/: 31.5032.50
quantity> cm3/10s: (27.0098.00) 2nd speed	+ > 1000s.: (29.8034.20
Charge press. hPa: 800	I
Shutoff	I
electromagnet>Volt: 12.0	Idle delivery:
Overflow : 55.00138.00	+
quantity> cm3/10s: (40.00153.00)	+ 1st speed 1/min: 400
	+ Shutoff
Delivery-quant. and breakaway char.:	+ electromagnet>Volt: 12.0
	+ Del. quantity cm3/: 8.0012.0 + > 1000s : (6.0014.00)
1nd speed 1/min: 600	+ > 1000s.: (6.0014.00) + Dispersion cm3/: 3.0
Charge-air pressure-setting	7 Vispers (or Cilis): 3.0
point> hPa: 270	2nd speed 1/min: 500
LDA-stroke mm: 3.8	+ Shutoff
Shutoff	+ electromagnet>Volt: 12.0
electromagnet>Volt: 12.0	+ Del. quantity cm3/: 0.06.00

1000s.: -3rd speed 1/min: 800 Shutoff electromagnet>Volt: 12.0 Del. quantity cm3/: 0.0....2.0 1000s.: -Automatic starting fuel delivery: 1st speed 1/min: 350 Shutoff electromagnet>Volt: 12.0 Del. quantity cm3/: 44.00... > 1000s.: -1/min: 450 2nd speed Shutoff electromagnet>Volt: 12.0 Del. quantity cm3/: 0.0...43.0 1000s.: -Shutoff electromagnet: Cut-in : 10.0 >min voltage Rated voltage : 12.0 Mounting and assembly dimensions: Designation mm: 3.3 K KF mm: 5.7...5.9 mm: 0.7...0.9 MS SVS max. mm: 5.6 LDA stroke mm: 3.8 mm: 20.2...22.2 XK XL mm: 8.7...12.1 Remarks: : 0 (6.00...14.00) 3.

BOSCH-INJ.-PUMP TEST SPECIFICATIONS Note inst. in remarks column Test scheet : VMA : 06.95 Edition : 04.92 replaces Calibrating oil : ISO 4113 : VE4/9F2150L31-1 Injection pump Type number : 0 460 494 133 Customer-specific information Customer : MOTORI VM : HR 488 HT Engine TEST BENCH REQUIREMENTS Overflow restricti: 1 463 456 303 Calibrating-oil return>temp. > °C with>thermometer> : 40.00...48.00 Electronically> : 42.00...50.00 Inlet press., bar: 0.35 Calibrating nozzle-holder : 1 688 901 000 assembly> Openina bar: 147.00...150.00 Pressure> Test inj. tubing : 1 680 750 017 Outside diameter : 6.00 x Wall>thickness : 2.00 mm: 840 x Length> Start of delivery Prestroke (from BDC): -Injection pump setting values Test specifications in parentheses Timing-device travel 1/min: 1900 Charge press. hPa: 800 Setting value mm: 6,40...6,80 Shutoff electromagnet>Volt: 12.0 Supply-pump pressure

hPa: 800 Charge press Setting value bar: 5.70...6.30 electromagnet>Volt: 12.0 Full-load del. with charge press.: 1/min: 1600 Speed Charge press. hPa: 800 Del. quantity cm3/ 1000s.: 46.50...47.50 Shutoff electromagnet>Volt: 12.0 cm3/: 3,0 Dispersion 1000s.: -Full-load del. w/out charge press.: Speed 1/min: 600 Del. quantity cm3/ 1000s.: 31.50...32.50 Shutoff electromagnet>Volt: 12.0 Low-idle speed regulation 1/min: 400 Speed Charge press hPa: -Del. quantity cm3/ > 1000s.: 8.00...12.00 Shutoff electromagnet>Volt: 12.0 Del. quantity cm3/: 3.0 1000s.: -Full-load speed regulation Speed 1/min: 2300 Charge press hPa: 800 Del. quantity cm3/ 1000s.: 27.50...33.50 Shutoff electromagnet>Volt: 12.0 Start: 1/min: 100 Speed Charge press hPa: -Del. quantity cm3/: mind> 1000s.: 44.0 Shutoff electromagnet>Volt: 12.0 Inspection-pump test specifications Test specifications in parentheses Timing-device characteristic: 1st speed 1/min: 1000 Charge press hPa: 800

Speed

1/min: 1900

	1.302.10	+	electromagnet>Volt:	
	(1.002.40)	+	Del. quantity cm3/:	
electromagnet>Volt:	12.0	+	> 1000s.:	(37.6042.00)
2nd speed 1/min:		†	2nd speed 1/min:	
Charge press hPa: TD travel mm:		Ť	Charge press. hPa: Shutoff	้อนบ
	(5.907.30)	I	electromagnet Volt:	12 O
Shutoff	(3.707.30)	I	Del. quantity cm3/:	
electromagnet>Volt:	12.0	1	> 1000s.:	
3rd speed 1/min:	2150	1	3rd speed 1/min:	
	800	+	Charge press. hPa:	
	7.508.30	+	Shutoff	
> mm:	(7.208.60)	+	electromagnet>Volt:	12.0
Shutoff		+	Del. quantity cm3/:	0.010.0
electromagnet>Volt:	12.0	+	> 1000s.:	
		+	4th speed 1/min:	
Supply-pump pressur	e characteristic:	+	Charge press. hPa:	800
Ant annual Almina	/00	†	Shutoff	40.0
1st speed 1/min:		†	electromagnet>Volt:	
Charge press. hPa: Supply-pump	800	Ť	Del. quantity cm3/: > 1000s.:	(26.5034.50)
	2.002.60	I	5th speed 1/min:	
Shutoff	2.002.00	I	Charge press. hPa:	
electromagnet>Volt:	12.0	1	Shutoff	000
2nd speed 1/min:	1900	1	electromagnet>Volt:	12.0
Charge press. hPa:		+	Del. quantity cm3/:	40.0043.00
Supply-pump		+		(39 243.80)
	5.706.30	+	6th speed 1/min:	16G.
Shutoff		+	Charge press. hPa:	800
electromagnet>Volt:		+	Shutoff	
3rd speed 1/min:		+	electromagnet>Volt:	
Charge press. hPa:	800	+	Del. quantity cm3/:	
Supply-pump	/ 70 / 00	†		(44.7049.30)
•	6.306.90	†	7th speed 1/min:	
Shutoff electromagnet>Volt:	12.0	Ī	Charge press. hPa: Shutoff	270
etectromagnet/vott:	12.0	I	electromagnet>Volt:	12 0
Overlow quantity at	overflow valve:	I	Del. quantity cm3/:	
over con quarterly at	Over real vacter	1		(37.6042.00)
1st speed 1/min:	600	1	8th speed 1/min:	
Charge press. hPa:		+ .	Charge press. hPa:	
Shutoff		+	Shutoff	
electromagnet>Volt:		+	electromagnet>Volt:	12.0
	42.0083.00	+	Del. quantity cm3/:	
quantity> cm3/10s:		+	> 1000s.:	(29.8034.20
2nd speed 1/min:		†		
Charge press. hPa:	800	†		
Shutoff	12.0	†	Talla alala camera	
<pre>electromagnet>Volt: Overflow :</pre>	55.00138.00	Ť	Idle delivery:	
quantity> cm3/10s:		I	1st speed 1/min:	400
quarterty cliby tos.	(40.00193.00)	Ι	Shutoff	400
Delivery-quant. and	breakaway char.:	1	electromagnet>Volt:	12.0
beering quarter and		+	Del. quantity cm3/:	
		+		(6.0014.00)
1nd speed 1/min:	600	+	Dispersion cm3/:	
Charge-air pressure-	setting	+	> 1000s.:	-
point> hPa:	270	+	2nd speed 1/min:	500
LDA-stroke mm:	3.8	+	Shutoff	
Shutoff		+	electromagnet>Volt:	12.0

Del. quantity cm3/: 0.0...6.00 1000s.: -3rd speed 1/min: 800 Shutoff electromagnet>Volt: 12.0 Del. quantity cm3/: 0.0...2.0 1000s.: -Automatic starting fuel delivery: 1st speed 1/min: 350 Shutoff electromagnet>Volt: 12.0 Del. quantity cm3/: 44.00... 1000s.: -1/min: 450 2nd speed Shutoff electromagnet>Volt: 12.0 Del. quantity cm3/: 0.0...43.0 1000s.: -Shutoff electromagnet: Cut-in >min voltage : 10.0 Rated voltage : 12.0 Mounting and assembly dimensions: Designation mm: 3.3 KF mm: 5.7...5.9 mm: 0.7...0.9 MS mm: 5.6 SVS max. mm: 3.8 LDA stroke XK mm: 20.2...22.2 XL mm: 8.7...12.1 Remarks: : 0 (6.00...14.00) 3.

Shutoff BOSCH-INJ.-PUMP TEST SPECIFICATIONS electromagnet>Volt: 12 Note inst. in remarks column Supply-pump pressure : PEU Test scheet Speed 1/min: 1250 Edition : 04.08.95 Charge press hPa: 1000 replaces Setting value bar: 5.30...5.90 : ISO-4113 Calibrating oil Shutoff electromagnet>Volt: 12 Injection pump : VE4/9F2250R513 : 0 460 494 341 Type number Full-load del. with charge press.: Customer Part-No. : 1/min: 1250 Charge press. hPa: 1000 Customer-specific information Del. quantity cm3/ 1000s.: 53.50...54.50 Customer : PSA Shutoff Engine : XUD 9 TF-Y electromagnet>Volt: 12 cm3/: 2.0 Dispersion TEST BENCH REQUIREMENTS 1000s.: (3.0) Overflow restricti: 1 463 456 303 Full-load del. w/out charge press.: 1/min: 500 Calibrating-oil Speed return>temp. > °C Del. quantity cm3/ 1000s.: 36.50...37.50 with>thermometer> : 40.00...48.00 Electronically> : 42.00...50.00 Shutoff electromagnet>Volt: 12 Inlet press., bar : 0.30...0.40 Residual-Delivery Setting Calibrating nozzle-holder : 1 688 901 022 assembly> Speed 1/min: 490 Del. quantity cm3/ 1000s.: 8.00...9.00 Opening | Pressure> bar: 130.00...133.00 Shutoff electromagnet Volt: 12 Test inj. tubing : 1 680 750 073 Full-load speed regulation Outside diameter : 6.00 1/min: 2575 Speed hPa: 1000 x Wall>thickness : 2.00 Charge press mm: 450 Del. quantity cm3/ x Length> 1000s.: 12.00...16.00 Start of delivery Shutoff electromagnet>Volt: 12 Prestroke (from BDC): -Start: Indicator setting 1/min: 150 Piston stroke> mm: 0.3 Del. quantity cm3/: 37.00...67.00 Out Let> : A mind> 1000s.: 37.00 Shutoff Injection-pump setting values Test specifications in parentheses electromagnet>Volt: 12 Timing-device travel Load-dependent start of delivery: Inj.-qty.dif.measurement: Speed 1/min: 1250 Charge press. hPa: 1000 Speed 1/min: 1250 Setting value mm: 3.40...3.80 Inj.-qty. cm3/

difference> 1000s.: -11.0...15.0 * Shutoff 1/min: 500 1st speed electromagnet>Volt: 12 Charge press. hPa: 1000 TD-travel dif.measurement Shutoff electromagnet>Volt: 12 1/min: 1250 1.Speed : 41.70...86.10 Overflow TD-travel quantity> cm3/10s: (26.70...101.10) difference> mm: -0.9...1.1 *2nd speed 1/min: 2150 Shutoff Charge press. hPa: 1000 electromagnet>Volt: 12 Shutoff electromagnet>Volt: 12 Inspection-pump test specifications : 55.60...139.00 Overflow Test specifications in parentheses quantity> cm3/10s: (40.60...154.00) Timing-device characteristic: Delivery-quant. and breakaway char.: 2nd speed 1/min: 2000 Charge press hPa: 1000 1nd speed 1/min: 750 mm: 6.10...6.90 TD travel Charge-air pressure-setting mm: (5.80...7.20) hPa: 350 point> Shutoff Shutoff electromagnet>Volt: 12 electromagnet>Volt: 12 3rd speed 1/min: 1250 Del. quantity cm3/: 45.50...46.50 hPa: 1000 1000s.: (43.00...49.00) Charge press TD travel mm: 3.40...3.80 1/min: 2750 2nd speed mm: (2.90...4.30) Charge press. hPa: 1000 Shutoff Shutoff electromagnet>Volt: 12 4th speed 1/min: 750 electromagnet Volt: 12 Del. quantity cm3/: 0.00...6.00 Charge press hPa: 1000 1000s.: (0.00...6.00) TD travel mm: 1.10...1.90 5th speed 1/min: 2575 mm: (0.80...2.20) Charge press. hPa: 1000 Shutoff Shutoff electromagnet>Volt: 12 electromagnet>Volt: 12 Del. quantity cm3/: 12.00...16.00 1000s.: (10.00...18.00) 1/min: 2375 Supply-pump pressure characteristic: 8th speed 1/min: 750 1st speed Charge press. hPa: 1000 Charge press. hPa: 1000 Shutoff Supply-pump electromagnet>Volt: 12 bar: 4.00...4.60 Del. quantity cm3/: 34.00...44.00 pressure> 1000s.: (33.00...45.00) bar: -1/min: 2150 Shutoff 9th speed electromagnet>Volt: 12 Charge press. hPa: 1000 1/min: 1250 2nd speed Shutoff Charge press. hPa: 1000 electromagnet>Volt: 12 Del. quantity cm3/: 49.10...51.10 Supply-pump bar: 5.30...5.90 1000s.: (47.90...52.30) pressure> 1/min: 2000 10th speed > bar: -Shutoff Charge press. hPa: 1000 electromagnet>Volt: 12 Shutoff 1/min: 2000 3rd speed electromagnet>Volt: 12 Del. quantity cm3/: 51.00...53.00 > 1000s.: (49.80...54.20) Charge press. hPa: 1000 Supply-pump bar: 7.20...7.80 pressure> 1/min: 1250 12th speed bar: -Charge press. hPa: 1000 > Shutoff Shutoff electromagnet>Volt: 12 electromagnet>Volt: 12 Del. quantity cm3/: 53.50...54.50 1000s.: (51.8...56.2) Overlow quantity at overflow valve:

18th speed 1/min: 500 TD-travel dif.measurement: Charge press. hPa: correttore anticipo iniezione (SV): Shutoff 1st speed 1/min: 1250 electromagnet>Volt: 12 TD-travel : -1.40...3.0 " Del. quantity cm3/: 36.50...37.50 difference> 1000s.: (34.00...40.00) 1/min: 500 Shutoff 20th speed electromagnet>Volt: 12 Charge press. hPa: 1000 Shutoff SP press.-dif.measurement: electromagnet>Volt: 12 pompa di mandata (FP): Del. quantity cm3/: 46.80...49.80 1st speed 1/min: 1250 1000s.: (45.30...51.30) Supply pump-: -0.1...0.3 " pressure > difference> bar: -Shutoff Electr. shutoff: electromagnet>Volt: 12 1st speed 1/min: 440 Automatic starting fuel delivery: Del. quantity cm3/: 0.00...3.00 1000s.: (0.00...3.00) Shutoff 1/min: 380 2nd speed electromagnet>volt: -Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 25.00...45.00 Damper set qty.: 1000s.: (25.00...45.00) LFG-setting: 1/min: 200 3rd speed Idle delivery: Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 50.00...56.00 > 1000s.: (45.50...60.50) 1/min: 440 1st speed Shutoff electromagnet Volt: 12 Del. quantity cm3/: 15.00...17.00 1/min: 150 4th speed 1000s.: (12.00...20.00) Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 37.00...67.00 High Idle: 1000s.: (37.00...67.00) 1/mi: 490 1st speed Shutoff Shutoff electromagnet: electromagnet>Volt: 12 Del. quantity cm3/: 15.00...17.00 Cut-in 1000s.: (12.00...20.00) >min vol nge : 10.0 : 12.0 Rated voltage Rest delivery: Mounting and assembly dimensions: 1st speed 1/min: 490 Shutoff Designation mm: 3.2...3.4 electromagnet>Volt: 12 Κ Del. quantity cm3/: 8.00...9.00 KF mm: KOT 1000s.: (6.50...10.50) MS mm: 1.1...1.5 mm: 28.8...32.8 Ya Yb mm: 69.2...80.8 Load-dependent start of delivery: Inj.-qty.dif.measurement: Remarks: 1st speed 1/min: 1250 : Inj.-qty. cm3/ : 2.0...11.0 Z" difference> 1000S.: -Ya = Distance between VE flange and Shutoff speed-control lever in idle electromagnet>Volt: 12 position Measurement point = edge of control

lever on drive end

Yb = Distance between VE flange and speed-control lever in rated speed position Measurement point = edge of control lever on distributor-head end

Z = Absolute delivery

Note inst. in remarks column

Test scheet : REN

Edition : 08.08.95

replaces : -

Calibrating oil : ISO-4113

Injection pump : VE4/9F2050R452-2

Type number : 0 460 494 351

Customer Part-No. :

Customer-specific information

Customer : RENAULT

Engine : J85-758

TEST BENCH REQUIREMENTS

Overflow restricti: 1 463 456 303

Calibrating-oil return>temp. > °C

with>thermometer> : 40.00...48.00 Electronically> : 42.00...50.00

Inlet press., bar : 0.30...0.40

Calibrating nozzle-holder

assembly> : 1 688 901 022

Opening |

Pressure> bar: 130.00...133.00

Test inj. tubing : 1 680 750 073

Outside diameter : 6.00

x Wall>thickness : 2.00 x Length> mm: 450

Start of delivery

Prestroke mm: > (from BDC): -

Injection-pump setting values Test specifications in parentheses

Timing-device travel

Speed 1/min: 1125

Setting value mm: 2.60...3.00

Shutoff

electromagnet>Volt: 12.0

Supply-pump pressure

Speed 1/min: 1125

Setting value bar: 4.20...4.80

Shutoff

electromagnet>Volt: 12.0

Full-load del. w/out charge press.:

Speed 1/min: 1125

Del. quantity cm3/

> 1000s.: 35.2...36.2

Shutoff

electromagnet>Volt: 12.0 Dispersion cm3/: 2.5 > 1000s.: (3.0)

Residual-Delivery Setting

Speed 1/min: 500

Del. quantity cm3/

> 1000s.: 2.00...6.00

Shutoff

electromagnet Volt: 12.0

Full-load speed regulation

Speed 1/min: 2200

Del. quantity cm3/

> 1000s.: 17.cu...23.00

Shutoff

electromagnet>Volt: 12.0

Start:

Speed 1/min: 100

Del. quantity cm3/: 52.00...92.00

mind> 1000s.: 52.00

Shutoff

electromagnet>Volt: 12.0

Load-dependent start of delivery:

Inj.-qty.dif.measurement:

Speed 1/min: 1125

Inj.-qty. cm3/

difference> 100CS.: -11.0...15.0 *

Shutoff

electromagnet>Volt: 12.0 TD-travel dif.measurement

1.Speed 1/min: 1125

TD-travel

difference> mm: -0.5...0.7 *

Shutoff

electromagnet>Volt: 12.0

Inspection—pump test specifications

Test specifications in parentheses

Timing-device characteristic:

1st speed 1/min:		Del. quantity cm3/: 2.5010.5
	0.71.5	> 1000s.: (1.511.5)
> mm:	(0.41.8)	3rd speed 1/min: 2200
electromagnet>Volt:	12.0	Shutoff
2nd speed 1/min:	1125	electromagnet>Volt: 12.0
TD travel mm:	2.63.0	Del. quantity cm3/: 17.023.0
	(2.13.5)	> 1000s.: (16.024.0)
Shutoff	1	4th speed 1/min: 2000
electromagnet>Volt:	12.0	Shutoff
3rd speed 1/min:	2000	electromagnet>Volt: 12.0
	7.107.90	Del. quantity cm3/: 33.835.8
	(6.808.20)	> 1000s.: (32.537.1)
Shutoff	1	5th speed 1/min: 1750
electromagnet>Volt:	12 0	Shutoff
ctetti dilagnet vott.	I	electromagnet>Volt: 12.0
Supply-pump pressur	e characteristic:	Del. quantity cm3/: 33.9035.90
outhry brink hi essui	e character iscre.	> 1000s.: (32.6037.20)
1st speed 1/min:	200	6th speed 1/min: 1125
	7	Shutoff
Supply-pump	3.103.70	
•		electromagnet>Volt: 12.0
> bar: Shutoff		Del. quantity cm3/: 35.236.2
	12.0	> 1000s.: (33.438.0)
electromagnet>Volt:	12.0	7th speed 1/min: 800
2nd speed 1/min:	1125	Shutoff
Supply-pump	†	electromagnet>Volt: 12.0
•	4.204.80	Del. quantity cm3/: 32.735.7
> bar:	- +	> 1000s.: (32 236.5)
Shutoff	+	
electromagnet>Volt:		
3rd speed 1/min:	2000 +	
Supply-pump	+	Electr. shutoff:
	6.307.10	
> bar:	- +	1st speed 1/min: 400
Shutoff	+	Del. quantity cm3/: 0.003.00
electromagnet>Volt:	12.0	> 1000s.: -
_	+	Shutoff
Overlow quantity at	overflow valve:	electromagnet>volt: -
	+	_
1st speed 1/min:	4 008	Damper set qty.:
Shutoff	+	
electromagnet>Volt:	12.0	LFG-setting:
	41.0083.30	
quantity> cm3/10s:		Idle delivery:
2nd speed 1/min:		
Shutoff		1st speed 1/min: 400
electromagnet>Volt:	12.0	Shutoff
	55.30138.70	electromagnet Volt: 12.0
quantity> cm3/10s:		Del. quantity cm3/: 6.0010.00
444,1010/	-	> 1000s.: (4.0012.00)
Delivery-quant. and	breakaway char.:	1000011 (10001112100)
beervery quarter and	bi cakanay cilai	High Idle:
	1	771917 20101
1nd speed 1/min:	2450 I	1st speed 1/mi: 500
Shutoff	I	Shutoff
electromagnet>Volt:	12 n	electromagnet>Volt: 12.0
Del. quantity cm3/:		Del. quantity cm3/: 8.512.5
> quantity clis/:		> 1000S.: (6.514.5)
		/ 10003.: (0,314.3)
	(2)(Post dolivorus
Shutoff	13.0	Rest delivery:
electromagnet Volt:	12.0 +	

1st speed 1/min: 500 Shutoff	+ 2nd speed 1/min: 210 + Shutoff
electromagnet>Volt: 12.0	+ electromagnet>Volt: 12.0
Del. quantity cm3/: 2.006.00	+ Del. quantity cm3/: 45.0085.00
> 1000s.: -	+ > 1000s.: -
, , , , , , , , , , , , , , , , , , , ,	10000
Load-dependent start of delivery:	4 3rd speed 1/min: 100
Inj.—qty.dif.measurement:	+ Shutoff
2011 de y car i cincadar cinci ie:	+ electromagnet>Volt: 12.0
1st speed 1/min: 1125	+ Del. quantity cm3/: 52.092.0
Charge press. hPa: -	+ > 1000s.: -
Injqty. cm3/ : -10.012.0 "	10005.: -
	Chimage all and a service and
difference> 1000s.: -	+ Shutoff electromagnet:
Shutoff 12.0	Ť (c
electromagnet>Volt: 12.0	+ Cut-in
2nd speed 1/min: 1125	+ >min voltage : 10.0
Charge press. hPa: -	+ Rated voltage : 12.0
Injqty. cm3/: 2.08.0 Z'	†
difference> 1000S.: -	+ Mounting and assembly dimensions:
Shutoff	+
electromagnet Volt: 12.0	+ Designation
	+ K mm: 3.23.4
TD-travel dif.measurement:	+ KF mm: 5.35.7
correttore anticipo iniezione (SV):	† MS mm: 1.11.3
1st speed 1/min: 1125	† Ya mm: 37.841.8
TD-travel : - 1.01.6 '	+ Yb mm: 41.952.1
difference> mm: -	+
Shutoff	+ Remarks:
electromagnet>Volt: 12.0	:
SP pressdif.measurement:	Ya = Distance between VE flange and
pompa di mandata (FP):	speed-control lever in idle
1st speed 1/min: 1125	position
Supply pump-	Measurement point = edge of control
pressure > : - 0.10.3 "	Lever on drive end
difference> bar: -	
Shutoff	
electromagnet>Volt: 12.0	Yb = Distance between VE flange and
Ctcoti ollagrice voter 12.0	+ speed-control lever in rated speed
Part-load del.at 3rd injgty.	position
terza fermo della portata	Measurement point = edge of control
stop (EGR set)	Lever on distributor-head end
scarico) (ARF)	Level on distributor flead end
gaz d'échappement-ARF)	
Spacing mm: 12.0	
Spacing min. 12.0	I
1st speed 1/min: 1000	Z = Absolute delivery
Shutoff	L - Absorate decivery
electromagnet>Volt: 12.0	On initial measurement, screw in
Del. quantity cm3/: 23.524.5	residual-quantity adjusting screw 1 mm.
> 1000s.: (21.526.5)	residual quantity adjusting screw i limi.
/ 10003.: (21.520.5)	Senou out mosidual quantity adjusting
Automatic starting fuel delivery:	 Screw out residual-quantity adjusting screw 1 mm after setting pump.
Automatic starting ruet detivery.	- Second than direct secrets bould.
1st speed 1/min: 310	
Shutoff -	1
electromagnet>Volt: 12.0	1
Del. quantity cm3/: 25.0045.00	
> 1000s.: -	
	t .

BOSCH-INJ.-PUMP TEST SPECIFICATIONS Note inst. in remarks column Test scheet : NIS Edition : 04.08.95 replaces Calibrating oil : ISO-4113 Injection pump : VE4/9F2250R577 Type number : 0 460 494 354 Customer Part-No. : Customer-specific information Customer : NISSAN-MISA Engine : GX-3 TEST BENCH REQUIREMENTS Overflow restricti: 1 463 456 303 Calibrating-oil return>temp. > °C with>thermometer> : 40.00...48.00 Electronically> : 42.00...50.00 Inlet press., bar : 0.30...0.40 Calibrating nozzle-holder : 1 688 901 022 assembly> Opening | bar: 130.00...133.00 Pressure> Test inj. tubing : 1 680 750 073 Outside diameter : 6.00 x Wall>thickness : 2.00 x Length> mm: 450 Injection pump setting values Test specifications in parentheses Timing-device travel 1/min: 1200 Setting value mm: 3.00...3.40

Full-load del. w/out charge press.: 1/min: 2150 Speed Del. quantity cm3/ 1000s.: 44.00...45.00 Shutoff electromagnet>Volt: 12 cm3/: 2.5 Dispersion 1000s.: (3.5) Low-idle speed regulation Speed 1/min: 350 Del. quantity cm3/ 1000s.: 6.5...10.5 Shutoff electromagnet>Volt: 12.0 Del. quantity cm3/: 2.5 1000s.: (3.0) Full-load speed regulation Speed 1/min: 2500 Del. quantity cm3/ 1000s.: 12.00...18.00 Shutoff electromagnet>Volt: 12 Start: Speed 1/min: 100 Del. quantity cm3/: 45.00...75.00 1000s.: 45.00 mind> Shutoff electromagnet>Volt: 12 Inspection-pump test specifications Test specifications in parentheses Timing-device characteristic: 1st speed 1/min: 2150 mm: 8.8...9.6 TD travel > mm: (8.5...9.9)
electromagnet>Volt: 12.0 1/min: 1200 2nd speed mm: 3.00...3.40 TD travel mm: (2.50...3.90) > Shutoff electromagnet>Volt: 12 1/min: 900 3rd speed mm: 0.80...1.60 TD travel mm: (0.50...1.90) Shutoff electromagnet>Volt: 12 Supply-pump pressure characteristic: 1st speed 1/min: 2150

Shutoff

Speed

Shutoff

electromagnet>Volt: 12

electromagnet>Volt: 12

1/min: 1200

Setting value bar: 5.60...6.20

Supply-pump pressure

Supply-pump		+	Shutoff	
pressure> bar:	8.208.80	+	electromagnet>Vol	t: 12.0
> bar:	_	+	Del. quantity cm3	
Shutoff		1		: (40.345.3)
electromagnet>Volt:	12	1		n: 900
2nd speed 1/min:		- 1	Shutoff	1. 700
	1200	T		40.0
Supply-pump	5 40 4 00	†	electromagnet>Volt	
	5.606.20	+	Del. quantity cm3	
> bar:	-	+		.: (39.544.5)
Shutoff		+	8th speed 1/mir	n: 600
electromagnet>Volt:	12	1	Shutoff	
3rd speed 1/min:		1	electromagnet>Volt	• 12
Supply-pump	700	1		
	/ 70	T	Del. quantity cm3/	
•	4.705.30	T	> 10005	: (38.543.5)
> bar:	-	t		
Shutoff		+		
electromagnet>Volt:	12	+		
..		1	Electr. shutoff:	
Overlow quantity at	overflow valves	1	eccci i silatoi i .	
over ton qualitity at	over I tow vatve.	Ŧ	1st speed 1/min	750
4	200	Ť		: 350
1st speed 1/min:	600	+	Del. quantity cm3/	
Shutoff		+	> 1000s.	: (0.003.00)
electromagnet>Volt:	12	+	Shutoff	
Overflow :	41.7086.10	1	electromagnet>volt	• -
quantity> cm3/10s:		1	o coot omagnet voc	• •
		T	Tall an alad di camin	
2nd speed 1/min:	2130	†	Idle delivery:	
Shutoff		t		
electromagnet>Volt:		+	1st speed 1/mir	n: 35G
Overflow :	55.60139.00	+	Shutoff	
quantity> cm3/10s:	(40.60154.00)	1	electromagnet>Volt	- 12.0
444.76.767	(40.00.11174.00)	1	Del. quantity cm3/	
Daldrams mand and	breekerer eben e	T		
Delivery-quant. and	preakaway char.:	†		: (4.5012.5)
		†		: 800
		+	Shutoff	
1nd speed 1/min:	2700	+	electromagnet>Volt	: 12.0
Shutoff		ļ.	Del. quantity cm3/	
electromagnet>Volt:	12	1	> 1000s.	
Del. quantity cm3/:		1	3rd speed 1/min	-
		T		: 500
> 1000s.:		†	Shutoff	
2nd speed 1/min:	2500	+	electromagnet>Volt	
Shutoff		+	Del. quantity cm3/	: 0.003.00
electromagnet Volt:	12	+	> 1000s.	: -
Del. quantity cm3/:		1	4th speed 1/min	· 250
> 1000s.:	(10.519.5)	1	Shutoff	
3rd speed 1/min:		T		. 12.0
	2330	T	electromagnet Volt	
Shutoff		†	Del. quantity cm3/	: 27.033.0
electromagnet>Volt:	12.0	+	> 1000s.	: (25.035.0)
Del. quantity cm3/:	29.337.3	+		
	(27.838.8)	+	High Idle:	
4th speed 1/min:		A.		
Shutoff	2130	1	1st speed 1/mi	: 500
	40.0	T		: 200
electromagnet>Volt:		†	Shutoff	40.0
Del. quantity cm3/:		+	electromagnet>Volt	
> 1000s.:	(43.245.8)	+	Del. quantity cm3/	: 7.510.5
5th speed 1/min:		+		: TLA 4.7 MM
Shutoff		1		
	12		Automotic starting	fuel definer
electromagnet>Volt:		T	Automatic starting	idet detivery:
Del. quantity cm3/:		t		-70
	(41.6046.60)	t	1st speed 1/min	: 270
6th speed 1/min:	1200	+	Shutoff	

```
electromagnet>Volt: 12.0
Del. quantity cm3/: 50.0...
             1000s.: -
             1/min: 400
2nd speed
 Shutoff
electromagnet>Volt: 12.0
Del. quantity cm3/: 00.0...50.0
            1000s.: -
3rd speed
             1/min: 100
Shutoff
electromagnet>Volt: 12.0
Del. quantity cm3/: 45.0...75.0
            1000s.: -
Shutoff electromagnet:
Cut-in
>min voltage
                  : 10.0
                  : 12.0
Rated voltage
Mounting and assembly dimensions:
Designation
                mm: 3.2...3.4
K
KF
                mm: 5.2...5.6
                mm: 1.1...1.3
MS
                mm: 4.7
TLA-A
                mm: KSB-HEBEL
XK
                mm: 4.3 MM
XL
                mm: 35.1...39.1
Ya
                mm: 59.9...71.1
Ajustement Potentiometer:
Angle for
                 °: 25
pot.
Supply voltage
     >
              volt: 5.0
pot.
Output volt
            volt: 0.8
pot.
     >
Remarks:
Ya = Distance between VE flange and
speed-control lever in idle
position
Measurement point = edge of control
lever on drive end
Yb = Distance between VE flange and
speed-control lever in rated speed
position
Measurement point = edge of control
lever on distributor-head end
```

Note inst. in remarks column

Test scheet : NIS

Edition : 04.08.95

replaces : -

Calibrating oil : ISO-4113

Injection pump : VE4/9F2250R577-1

Type number : 0 460 494 355

Customer Part-No. :

Customer—specific information
Customer : NISSAN-MISA

Engine : GX-3

TEST BENCH REQUIREMENTS

Overflow restricti: 1 463 456 303

Calibrating-oil return>temp. > °C

with>thermometer> : 40.00...48.00 Electronically> : 42.00...50.00

Inlet press., bar: 0.30...0.40

Calibrating nozzle-holder

assembly> : 1 688 901 022

Opening

Pressure> bar: 130.00...133.00

Test inj. tubing : 1 680 750 073

Outside diameter : 6.00 x Wall>thickness : 2.00 x Length> mm: 450

Injection pump setting values
Test specifications in parentheses

Timing-device travel

Speed 1/min: 1200

Setting value mm: 3.00...3.40

Shutoff

electromagnet>Volt: 12

Supply-pump pressure

Speed 1/min: 1200

Setting value bar: 5.60...6.20

Shutoff

electromagnet>Volt: 12

Full-load del. w/out charge press.:

Speed 1/min: 2150

Del. quantity cm3/

1000s.: 44.00...45.00

Shutoff

electromagnet>Volt: 12 Dispersion cm3/: 2.5 > 1000s.: (3.5)

Low-idle speed regulation

Speed 1/min: 350

Del. quantity cm3/

> 1000s.: 6.5...10.5

Shutoff

electromagnet>Volt: 12.0 Del. quantity cm3/: 2.5 > 1000s.: (3.0)

Full-load speed regulation

Speed 1/min: 2500

Del. quantity cm3/

> 1000s.: 12.00...18.00

Shutoff

electromagnet>Volt: 12

Start:

Speed 1/min: 100

Del. quantity cm3/: 45.00...75.00

mind> 1000s.: 45.00

Shutoff

electromagnet>Volt: 12

Inspection-pump test specifications Test specifications in parentheses

Timing device characteristic:

TD travel mm: 8.8...9.6 mm: (8.5...9.9)

electromagnet>Volt: 12.0

2nd speed 1/min: 1200

TD travel mm: 3.00...3.40

> mm: (2.50...3.90)

Shutoff

electromagnet>Volt: 12 3rd speed 1/min: 900

TD travel mm: 0.80...1.60

> mm: (0.50...1.90)

Shutoff

electromagnet>Volt: 12

Supply-pump pressure characteristic:

1st speed 1/min: 2150

Supply-pump		+	Shutoff	
pressure> bar:	8.208.80	+	electromagnet>Volt:	12.0
> bar:	-	+	Del. quantity cm3/:	41.344.3
Shutoff		+		(40.345.3)
electromagnet>Volt:		+	7th speed 1/min:	900
2nd speed 1/min:	1200	+	Shutoff	
Supply-pump	5 40 4 00	†	electromagnet>Volt:	
pressure> bar:		+	Del. quantity cm3/:	
> bar:	_	+		(39.544.5)
Shutoff	43	+	8th speed 1/min:	600
electromagnet>Volt:	000	†	Shutoff	43
3rd speed 1/min:	900	†	electromagnet>Volt:	
Supply-pump	4.705.30	Ť	Del. quantity cm3/:	
pressure> bar: > bar:		T	/ 10005.:	(38.543.5)
Shutoff	_	T		
electromagnet>Volt:	12	Ι		
etectromagnet/vott:	12	Ι	Electr. shutoff:	
Overlow quantity at	overflow valves	I	etectr. silutorr.	
over tow quarterty at	over flow valve.	Ι	1st speed 1/min:	350
1st speed 1/min:	600	Ι	Del. quantity cm3/:	
Shutoff	000	I		(0.003.00)
electromagnet>Volt:	12	1	Shutoff	(0.005.00)
Overflow :	41.7086.10	1	electromagnet>volt:	-
quantity> cm3/10s:		1	cecoti oliugi ie e- voce:	
2nd speed 1/min:	2150	1	Idle delivery:	
Shutoff		1	2010 001110191	
electromagnet>Volt:	12	1	1st speed 1/min:	356
Overflow :	55.60139.00	1	Shutoff	
quantity> cm3/10s:		1	electromagnet>Volt:	12.0
		+	Del. quantity cm3/:	
Delivery-quant. and	breakaway char.:	+		(4.5012.5)
•	•	+	2nd speed 1/min:	
		+	Shutoff	
1nd speed 1/min:	2700	+	electromagnet>Volt:	12.0
Shutoff		+	Del. quantity cm3/:	0.005.00
electromagnet>Volt:		+	> 1000s.:	
Del. quantity cm3/:		+	3rd speed 1/min:	5 0 0
> 1000s.:		+	Shutoff	
2nd speed 1/min:	2500	+	electromagnet>Volt:	12.0
Shutoff		+	Del. quantity cm3/:	0.003.00
electromagnet Volt:		+	> 1000s.:	
Del. quantity cm3/:	12.018.0	+	4th speed 1/min:	250
	(10.519.5)	+	Shutoff	40.0
3rd speed 1/min:	2350	†	electromagnet Volt:	12.0
Shutoff	12.0	†	Del. quantity cm3/:	27.033.0
electromagnet>Volt:		Ť	> 1000s.:	(25.035.0)
Del. quantity cm3/: > 1000s.:	(27.0 70.0)	Ť	Ušeb Talles	
	(27.838.8)	T	High Idle:	
	2130	T	int annual 1/min	500
Shutoff electromagnet>Volt:	12 fl	I	1st speed 1/mi: Shutoff	200
Del. quantity cm3/:		Ι	electromagnet>Volt:	12.0
	(43.245.8)	I	Del. quantity cm3/:	
5th speed 1/min:		I		TLA 4.7 MM
Shutoff	1000	I	10000	THE TAIL THE
electromagnet>Volt:	12	1	Automatic starting 1	fuel delivery.
Del. quantity cm3/:		1	macondero ocurerity i	ace accivery.
	(41.6046.60)	1	1st speed 1/min:	270
6th speed 1/min:		1	Shutoff	

```
electromagnet>Volt: 12.0
 Del. quantity cm3/: 50.0...
             1000s.: -
              1/min: 400
 2nd speed
 Shutoff
 electromagnet>Volt: 12.0
 Del. quantity cm3/: 00.0...50.0
             1000s.: -
             1/min: 100
3rd speed
Shutoff
electromagnet>Volt: 12.0
Del. quantity cm3/: 45.0...75.0
            1000s.: -
Shutoff electromagnet:
Cut-in
>min voltage
                  : 10.0
Rated voltage
                 : 12.0
Mounting and assembly dimensions:
Designation
                mm: 3.2...3.4
KF
                mm: 5.2...5.6
MS
                mm: 1.1...1.3
TLA-A
                mm: 4.7
                mm: KSB-HEBEL
XK
                mm: 4.3 MM
XL
                mm: 35.1...39.1
Ya
                mm: 59.9...71.1
Ajustement Potentiometer:
Angle for >
                 °: 25
Supply voltage
pot.
     >
              volt: 5.0
Output volt
pot. >
              volt: 0.8
Remarks:
Ya = Distance between VE flange and
speed-control lever in idle
position
Measurement point = edge of control
lever on drive end
Yb = Distance between VE flange and
speed-control lever in rated speed
position
Measurement point = edge of control
lever on distributor-head end
```

Note inst. in remarks column

Test scheet : VW

Edition : 04.08.95

replaces : -

Calibrating oil : ISO-4113

Injection pump : VE4/9F2100R471-1
Type number : 0 460 494 356

Customer Part-No. :

Customer—specific information Customer : VW 1.9 L

Engine : UD T4

TEST BENCH REQUIREMENTS

Overflow restricti: 1 463 456 303

Calibrating-oil return>temp. > °C

with>thermometer> : 40.00...48.00 Electronically> : 42.00...50.00

Inlet press., bar: 0.30...0.40

Calibrating nozzle-holder

assembly> : 1 688 901 111

Opening |

Pressure> bar: 147.00...150.00

Test inj. tubing : 1 680 750 073

Outside diameter : 6.00 x Wall>thickness : 2.00 x Length> mm: 450

Start of delivery
Prestroke mm: > (from BDC): -

Injection-pump setting values
Test specifications in parentheses

Timing-device travel

Speed 1/min: 1250

Setting value mm: 3.70...4.10

Shutoff

electromagnet>Volt: 12

Supply-pump pressure

Speed 1/min: 1250

Setting value bar: 5.30...5.90

Shutoff

electromagnet>Volt: 12

Full-load del. w/out charge press.:

Speed 1/min: 1250

Del. quantity cm3/

> 1000s.: 39.50...40.50

Shutoff

electromagnet>Volt: 12 Dispersion cm3/: 2.5 > 1000s.: (3.5)

Residual-Delivery Setting

Speed 1/min: 550

Del. quantity cm3/

> 1000s.: 5.0...6.0

Shutoff

electromagnet Volt: 12.0 Dispersion cm3/: 2.0 > 1000s.: (3.0)

Full-load speed regulation

Speed 1/min: 240.

Del. quantity cm3/

> 1000s.: 13.00...17.00

Shutoff

electromagnet>Volt: 12

Start:

Speed 1/min: 100

Del. quantity cm3/: 40.00...90.00

mind> 1000s.: 40.00

Shutoff

electromagnet>Volt: 12

Load-dependent start of delivery:

Inj.-qty.dif.measurement:

Speed 1/min: 1250

Inj.-qty. cm3/

difference> 1000s.: - 7.0...13.0 *

Shutoff

electromagnet>Volt: 12.0 TD-travel dif.measurement

1. Speed 1/min: 1250

TD-travel

difference> mm: -0.9...1.1 *

Shutoff

electromagnet>Volt: 12.0

Inspection-pump test specifications Test specifications in parentheses

Timing-device characteristic:	† Shutoff
	+ electromagnet Volt: 12
1st speed 1/min: 1250	Del. quantity cm3/: 13.017.0
TD travel mm: 3.74.1	+ > 1000s.: (11.019.0)
> mm: (3.14.7)	- 3rd speed 1/min: 2250
electromagnet>Volt: 12.0	+ Shutoff
2nd speed 1/min: 1700	+ electromagnet>Volt: 12.0
TD travel mm: 5.606.40	+ Del. quantity cm3/: 24.034.0
> mm: (5.206.80)	+ > 1000s.: (23.035.0)
Shutoff	+ 4th speed 1/min: 1850
electromagnet>Volt: 12	+ Shutoff
3rd speed 1/min: 750	+ electromagnet>Volt: 12.0
TD travel mm: 1.101.90	+ Del. quantity cm3/: 40.042.0
> mm: (0.702.30)	+ > 1000s.: (38.843.2)
Shutoff	5th speed 1/min: 1250
electromagnet>Volt: 12	+ Shutoff
Cecel anagilee voce. 12	electromagnet>Volt: 12
Supply-pump pressure characteristic:	Del. quantity cm3/: 39.5040.50
oupply pump pressure thanacteristic.	1000s.: (37.8042.20)
1st speed 1/min: 1250	4/min 750
	+ 6th speed 1/min: 750
Supply-pump	+ Shutoff
pressure> bar: 5.305.90	+ electromagnet>Volt: 12.0
> bar: -	+ Del. quantity cm3/: 37.040.0
Shutoff	+ > 1000s.: (35.541.5)
electromagnet>Volt: 12	+ 7th speed 1/min: 450
2nd speed 1/min: 1700	+ Shutoff
Supply-pump	+ electromagnet>Volt: 12.0
pressure> bar: 6.607.20	+ Del. quantity cm3/: 3642.0
> bar: -	+ > 1000s.: (33.544.5)
Shutoff	1
electromagnet>Volt: 12	1
3rd speed 1/min: 750	1
Supply-pump	+ Electr. shutoff:
pressure> bar: 3.804.40	
> bar: -	+ 1st speed 1/min: 425
Shutoff	+ Del. quantity cm3/: 0.003.00
electromagnet>Volt: 12	1000s.: (0.003.00)
etectrollagriet/vott. 12	Shutoff
Aventer, manifely of evention values	
Overlow quantity at overflow valve:	+ electromagnet>volt: -
4 - t 1	
1st speed 1/min: 750	† Damper set qty.:
Shutoff	†
electromagnet>Volt: 12	+ LFG-setting:
Overflow : 41.7086.10	+
quantity> cm3/10s: (26.70101.10)	+ Idle delivery:
2nd speed 1/min: 1850	+
Shutoff	+ 1st speed 1/min: 425
electromagnet>Volt: 12	+ Shutoff
Overflow : 55.60139.00	+ electromagnet Volt: 12.0
quantity> cm3/10s: (40.60154.00)	+ Del. quantity cm3/: 5.57.5
9.007 1007 1000 11000	+ > 1000s.: (2.510.5)
Delivery-quant. and breakaway char.:	1000011 (2.51.110.5)
betivery quality and bicanaway chairs	High Idle:
	I might rate.
1nd speed 1/min: 1650	1st speed 1/mi: 500
Shutoff	+ Shutoff
electromagnet>Volt: 12	+ electromagnet>Volt: 12.0
Del. quantity cm3/: 0.03.0	+ Del. quantity cm3/: 5.57.5
> 1000s.: -	+ > 1000s.: (2.510.5)
2nd speed 1/min: 2400	+

Rest delivery:	2nd speed 1/min: 180
+	Shutoff
1st speed 1/min: 550	electromagnet>Volt: 12.0
Shutoff	Del. quantity cm3/: 40.090.0
electromagnet>Voit: 12.0	> 1000s.: -
Del. quantity cm3/: 5.06.0	7 10003
vel. quantity cms/: 5.0o.u	-
> 1000s.: (3.57.5)	3rd speed 1/min: 100
2nd speed 1/min: 515	Shutoff
Shutoff	electromagnet>Volt: 12.0
electromagnet Volt: 12.0	Del. quantity cm3/: 40.090.0
Del. quantity cm3/: 5.57.5 +	> 1000s.: -
> 1000s.: (4.09.0)	
+	Shutoff electromagnet:
Load-dependent start of delivery:	3. • • • • • • • • • • • • • • • • • • •
Inj.—qty.dif.measurement:	Cut-in
Till. dry.dri.medsurement.	
	>min voltage : 10.0
1st speed 1/min: 1250 +	Rated voltage : 12.0
Inj.~qty. cm3/ : 0.03.0 Z " +	-
difference> 1000s.: -	Mounting and assembly dimensions:
Shutoff	rounting and assembly attracts to is.
electromagnet>Volt: 12.0	Designation
+	K mm: 3.23.4
TD-travel dif.measurement:	KF mm: 5.15.5
correttore anticipo iniezione (SV):	MS mm: 1.21.4
1st speed	XK mm: MIKROSCH.
TD-travel : - 1.31.7 " + difference> mm: - (0.92.1)	XL mm: 0.83.0 *
difference $mm: -(0.92.1)$	Ya mm: 20.022.0
Shutoff	Yb mm: 6172.5
electromagnet>Volt: 12.0	10 (IMD: OF::::12.)
etectromagnetzvotti izio	
	O ut
+	Remarks:
SP press.—dif.measurement:	Remarks: :
SP press.—dif.measurement:	Remarks: :
SP press.—dif.measurement: pompa di mandata (FP):	: :
SP press.—dif.measurement: pompa di mandata (FP): 1st speed 1/min: 1250	: : Ya = Distance between VE flange and
SP press.—dif.measurement: pompa di mandata (FP): 1st speed 1/min: 1250 Supply pump—	: : Ya = Distance between VE flange and speed-control lever in idle
SP press.—dif.measurement: pompa di mandata (FP): 1st speed 1/min: 1250 Supply pump- pressure > : - 0.71.1"	: : Ya = Distance between VE flange and speed-control lever in idle position
SP press.—dif.measurement: pompa di mandata (FP): 1st speed 1/min: 1250 Supply pump—	: : Ya = Distance between VE flange and speed-control lever in idle position
SP pressdif.measurement: pompa di mandata (FP): 1st speed 1/min: 1250 Supply pump- pressure > : - 0.71.1 " difference> bar: - (0.51.3)	: : Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control
SP pressdif.measurement: pompa di mandata (FP): 1st speed 1/min: 1250 Supply pump- pressure > : - 0.71.1 " difference> bar: - (0.51.3) Shutoff	: : Ya = Distance between VE flange and speed-control lever in idle position
SP pressdif.measurement: pompa di mandata (FP): 1st speed 1/min: 1250 Supply pump- pressure > : - 0.71.1 " difference> bar: - (0.51.3)	: : Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control
SP press.—dif.measurement: pompa di mandata (FP): 1st speed 1/min: 1250 Supply pump— pressure > : - 0.71.1 " difference> bar: - (0.51.3) Shutoff electromagnet>Volt: 12.0	: Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end
SP press.—dif.measurement: pompa di mandata (FP): 1st speed 1/min: 1250 Supply pump— pressure > : - 0.71.1 " difference> bar: - (0.51.3) Shutoff electromagnet>Volt: 12.0 Part-load del.at 3rd inj.—qty.	: Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end Yb = Distance between VE flange and
SP press.—dif.measurement: pompa di mandata (FP): 1st speed 1/min: 1250 Supply pump— pressure > : - 0.71.1 " difference> bar: - (0.51.3) Shutoff electromagnet>Volt: 12.0 Part-load del.at 3rd inj.—qty.	: Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end Yb = Distance between VE flange and
SP press.—dif.measurement: pompa di mandata (FP): 1st speed 1/min: 1250 Supply pump— pressure > : - 0.71.1 " difference> bar: - (0.51.3) Shutoff electromagnet>Volt: 12.0 Part-load del.at 3rd inj.—qty. terza fermo della portata	: Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end Yb = Distance between VE flange and speed-control lever in rated speed
SP press.—dif.measurement: pompa di mandata (FP): 1st speed 1/min: 1250 Supply pump— pressure > : - 0.71.1 " difference> bar: - (0.51.3) Shutoff electromagnet>Volt: 12.0 Part-load del.at 3rd inj.—qty. terza fermo della portata stop (EGR set)	: Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end Yb = Distance between VE flange and speed-control lever in rated speed position
SP pressdif.measurement: pompa di mandata (FP): 1st speed 1/min: 1250 Supply pump- pressure > :-0.71.1" difference> bar: - (0.51.3) Shutoff electromagnet>Volt: 12.0 Part-load del.at 3rd injqty. terza fermo della portata stop (EGR set) scarico) (ARF)	: Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end Yb = Distance between VE flange and speed-control lever in rated speed position Measurement point = edge of control
SP pressdif.measurement: pompa di mandata (FP): 1st speed 1/min: 1250 Supply pump- pressure > : - 0.71.1 " difference> bar: - (0.51.3) Shutoff electromagnet>Volt: 12.0 Part-load del.at 3rd injqty. terza fermo della portata stop (EGR set) scarico) (ARF) gaz d'échappement-ARF)	: Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end Yb = Distance between VE flange and speed-control lever in rated speed position
SP pressdif.measurement: pompa di mandata (FP): 1st speed 1/min: 1250 Supply pump- pressure > :-0.71.1" difference> bar: - (0.51.3) Shutoff electromagnet>Volt: 12.0 Part-load del.at 3rd injqty. terza fermo della portata stop (EGR set) scarico) (ARF)	: Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end Yb = Distance between VE flange and speed-control lever in rated speed position Measurement point = edge of control
SP pressdif.measurement: pompa di mandata (FP): 1st speed 1/min: 1250 Supply pump- pressure > : - 0.71.1 " difference> bar: - (0.51.3) Shutoff electromagnet>Volt: 12.0 Part-load del.at 3rd injqty. terza fermo della portata stop (EGR set) scarico) (ARF) gaz d'échappement-ARF)	: Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end Yb = Distance between VE flange and speed-control lever in rated speed position Measurement point = edge of control
SP press.—dif.measurement: pompa di mandata (FP): 1st speed 1/min: 1250 Supply pump— pressure > : - 0.71.1 " difference> bar: - (0.51.3) Shutoff electromagnet>Volt: 12.0 Part—load del.at 3rd inj.—qty. terza fermo della portata stop (EGR set) scarico) (ARF) gaz d'échappement—ARF) Spacing mm: 12.0	: Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end Yb = Distance between VE flange and speed-control lever in rated speed position Measurement point = edge of control
SP press.—dif.measurement: pompa di mandata (FP): 1st speed 1/min: 1250 Supply pump— pressure > : - 0.71.1 " difference> bar: - (0.51.3) Shutoff electromagnet>Volt: 12.0 Part-load del.at 3rd inj.—qty. terza fermo della portata stop (EGR set) scarico) (ARF) gaz d'échappement—ARF) Spacing mm: 12.0 1st speed 1/min: 1000	: Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end Yb = Distance between VE flange and speed-control lever in rated speed position Measurement point = edge of control
SP press.—dif.measurement: pompa di mandata (FP): 1st speed 1/min: 1250 Supply pump— pressure > : - 0.71.1 " difference> bar: - (0.51.3) Shutoff electromagnet>Volt: 12.0 Part-load del.at 3rd inj.—qty. terza fermo della portata stop (EGR set) scarico) (ARF) gaz d'échappement—ARF) Spacing mm: 12.0 1st speed 1/min: 1000 Shutoff	Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end Yb = Distance between VE flange and speed-control lever in rated speed position Measurement point = edge of control lever on distributor-head end
SP press.—dif.measurement: pompa di mandata (FP): 1st speed 1/min: 1250 Supply pump— pressure > : - 0.71.1 " difference> bar: - (0.51.3) Shutoff electromagnet>Volt: 12.0 Part-load del.at 3rd inj.—qty. terza fermo della portata stop (EGR set) scarico) (ARF) gaz d'échappement—ARF) Spacing mm: 12.0 1st speed 1/min: 1000 Shutoff electromagnet>Volt: 12.0	: Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end Yb = Distance between VE flange and speed-control lever in rated speed position Measurement point = edge of control
SP press.—dif.measurement: pompa di mandata (FP): 1st speed 1/min: 1250 Supply pump— pressure > : - 0.71.1 " difference> bar: - (0.51.3) Shutoff electromagnet>Volt: 12.0 Part-load del.at 3rd inj.—qty. terza fermo della portata stop (EGR set) scarico) (ARF) gaz d'échappement—ARF) Spacing mm: 12.0 1st speed 1/min: 1000 Shutoff electromagnet>Volt: 12.0 Del. quantity cm3/: 21.023.0 *	: Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end Yb = Distance between VE flange and speed-control lever in rated speed position Measurement point = edge of control lever on distributor-head end On initial measurement, screw in
SP press.—dif.measurement: pompa di mandata (FP): 1st speed 1/min: 1250 Supply pump— pressure > : - 0.71.1 " difference> bar: - (0.51.3) Shutoff electromagnet>Volt: 12.0 Part-load del.at 3rd inj.—qty. terza fermo della portata stop (EGR set) scarico) (ARF) gaz d'échappement—ARF) Spacing mm: 12.0 1st speed 1/min: 1000 Shutoff electromagnet>Volt: 12.0 Del. quantity cm3/: 21.023.0 *	Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end Yb = Distance between VE flange and speed-control lever in rated speed position Measurement point = edge of control lever on distributor-head end
SP press.—dif.measurement: pompa di mandata (FP): 1st speed 1/min: 1250 Supply pump— pressure > : - 0.71.1 " difference> bar: - (0.51.3) Shutoff electromagnet>Volt: 12.0 Part-load del.at 3rd inj.—qty. terza fermo della portata stop (EGR set) scarico) (ARF) gaz d'échappement—ARF) Spacing mm: 12.0 1st speed 1/min: 1000 Shutoff electromagnet>Volt: 12.0 Del. quantity cm3/: 21.023.0 *	Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end Yb = Distance between VE flange and speed-control lever in rated speed position Measurement point = edge of control lever on distributor-head end On initial measurement, screw in residual-quantity adjusting screw 2 mm.
SP press.—dif.measurement: pompa di mandata (FP): 1st speed 1/min: 1250 Supply pump— pressure > : - 0.71.1 " difference> bar: - (0.51.3) Shutoff electromagnet>Volt: 12.0 Part-load del.at 3rd inj.—qty. terza fermo della portata stop (EGR set) scarico) (ARF) gaz d'échappement—ARF) Spacing mm: 12.0 1st speed 1/min: 1000 Shutoff electromagnet>Volt: 12.0 Del. quantity cm3/: 21.023.0 * > 1000S.: (19.025.0)	Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end Yb = Distance between VE flange and speed-control lever in rated speed position Measurement point = edge of control lever on distributor-head end On initial measurement, screw in residual-quantity adjusting screw 2 mm. Following pump adjustment, screw out
SP press.—dif.measurement: pompa di mandata (FP): 1st speed 1/min: 1250 Supply pump— pressure > : - 0.71.1 " difference> bar: - (0.51.3) Shutoff electromagnet>Volt: 12.0 Part-load del.at 3rd inj.—qty. terza fermo della portata stop (EGR set) scarico) (ARF) gaz d'échappement—ARF) Spacing mm: 12.0 1st speed 1/min: 1000 Shutoff electromagnet>Volt: 12.0 Del. quantity cm3/: 21.023.0 *	Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end Yb = Distance between VE flange and speed-control lever in rated speed position Measurement point = edge of control lever on distributor-head end On initial measurement, screw in residual-quantity adjusting screw 2 mm.
SP press.—dif.measurement: pompa di mandata (FP): 1st speed 1/min: 1250 Supply pump— pressure > : - 0.71.1 " difference> bar: - (0.51.3) Shutoff electromagnet>Volt: 12.0 Part—load del.at 3rd inj.—qty. terza fermo della portata stop (EGR set) scarico) (ARF) gaz d'échappement—ARF) Spacing mm: 12.0 1st speed 1/min: 1000 Shutoff electromagnet>Volt: 12.0 Del. quantity cm3/: 21.023.0 * > 1000S.: (19.025.0) Automatic starting fuel delivery:	Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end Yb = Distance between VE flange and speed-control lever in rated speed position Measurement point = edge of control lever on distributor-head end On initial measurement, screw in residual-quantity adjusting screw 2 mm. Following pump adjustment, screw out
SP press.—dif.measurement: pompa di mandata (FP): 1st speed 1/min: 1250 Supply pump— pressure > : - 0.71.1 " difference> bar: - (0.51.3) Shutoff electromagnet>Volt: 12.0 Part-load del.at 3rd inj.—qty. terza fermo della portata stop (EGR set) scarico) (ARF) gaz d'échappement—ARF) Spacing mm: 12.0 1st speed 1/min: 1000 Shutoff electromagnet>Volt: 12.0 Del. quantity cm3/: 21.023.0 * > 1000S.: (19.025.0)	Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end Yb = Distance between VE flange and speed-control lever in rated speed position Measurement point = edge of control lever on distributor-head end On initial measurement, screw in residual-quantity adjusting screw 2 mm. Following pump adjustment, screw out
SP press.—dif.measurement: pompa di mandata (FP): 1st speed 1/min: 1250 Supply pump— pressure > : - 0.71.1" difference> bar: - (0.51.3) Shutoff electromagnet>Volt: 12.0 Part—load del.at 3rd inj.—qty. terza fermo della portata stop (EGR set) scarico) (ARF) gaz d'échappement—ARF) Spacing mm: 12.0 1st speed 1/min: 1000 Shutoff electromagnet>Volt: 12.0 Del. quantity cm3/: 21.023.0 * > 1000s.: (19.025.0) Automatic starting fuel delivery: 1st speed 1/min: 380	Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end Yb = Distance between VE flange and speed-control lever in rated speed position Measurement point = edge of control lever on distributor-head end On initial measurement, screw in residual-quantity adjusting screw 2 mm. Following pump adjustment, screw out
SP press.—dif.measurement: pompa di mandata (FP): 1st speed 1/min: 1250 Supply pump— pressure > : - 0.71.1" difference> bar: - (0.51.3) Shutoff electromagnet>Volt: 12.0 Part—load del.at 3rd inj.—qty. terza fermo della portata stop (EGR set) scarico) (ARF) gaz d'échappement—ARF) Spacing mm: 12.0 1st speed 1/min: 1000 Shutoff electromagnet>Volt: 12.0 Del. quantity cm3/: 21.023.0 * > 1000s.: (19.025.0) Automatic starting fuel delivery: 1st speed 1/min: 380 Shutoff	Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end Yb = Distance between VE flange and speed-control lever in rated speed position Measurement point = edge of control lever on distributor-head end On initial measurement, screw in residual-quantity adjusting screw 2 mm. Following pump adjustment, screw out
SP press.—dif.measurement: pompa di mandata (FP): 1st speed 1/min: 1250 Supply pump— pressure > : - 0.71.1 " difference> bar: - (0.51.3) Shutoff electromagnet>Volt: 12.0 Part—load del.at 3rd inj.—qty. terza fermo della portata stop (EGR set) scarico) (ARF) gaz d'échappement—ARF) Spacing mm: 12.0 1st speed 1/min: 1000 Shutoff electromagnet>Volt: 12.0 Del. quantity cm3/: 21.023.0 * > 1000S.: (19.025.0) Automatic starting fuel delivery: 1st speed 1/min: 380 Shutoff electromagnet>Volt: 12.0	Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end Yb = Distance between VE flange and speed-control lever in rated speed position Measurement point = edge of control lever on distributor-head end On initial measurement, screw in residual-quantity adjusting screw 2 mm. Following pump adjustment, screw out
SP press.—dif.measurement: pompa di mandata (FP): 1st speed 1/min: 1250 Supply pump— pressure > : - 0.71.1" difference> bar: - (0.51.3) Shutoff electromagnet>Volt: 12.0 Part—load del.at 3rd inj.—qty. terza fermo della portata stop (EGR set) scarico) (ARF) gaz d'échappement—ARF) Spacing mm: 12.0 1st speed 1/min: 1000 Shutoff electromagnet>Volt: 12.0 Del. quantity cm3/: 21.023.0 * > 1000s.: (19.025.0) Automatic starting fuel delivery: 1st speed 1/min: 380 Shutoff	Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end Yb = Distance between VE flange and speed-control lever in rated speed position Measurement point = edge of control lever on distributor-head end On initial measurement, screw in residual-quantity adjusting screw 2 mm. Following pump adjustment, screw out

Note inst. in remarks column

Test scheet : REN

Edition : 07.08.95

replaces :-

Calibrating oil : ISO-4113

Injection pump : VE4/9F2400R581 Type number : 0 460 494 357

Customer Part-No. :

Customer—specific information Customer : RENAULT

Engine : G8T - 752

TEST BENCH REQUIREMENTS

Overflow restricti: 1 463 456 303

Calibhating-oil return>temp. > °C

with>thermometer> : 40.00...48.00 Electronically> : 42.00...50.00

Inlet press., bar : 0.30...0.40

Calibrating nozzle-holder

assembly> : 1 688 901 022

Opening |

Pressure> bar: 130.00...133.00

Test inj. tubing : 1 680 750 073

Outside diameter : 6.00 x Wall>thickness : 2.00 x Length> mm: 450

Start of delivery

Prestroke mm:
> (from BDC): -

Injection-pump setting values
Test specifications in parentheses

Timing-device travel

Speed 1/min: 1250

Setting value mm: 2.30...2.70

Shutoff

electromagnet>Volt: 12

Supply-pump pressure

Speed 1/min: 1250

Setting value bar: 5.90...6.50

Shutoff

electromagnet>Volt: 12

Full-load del. w/out charge press.:

Speed 1/min: 1250

Del. quantity cm3/

> 1000s.: 36.9...37.9

Shutoff

electromagnet>Volt: 12.0 Dispersion cm3/: 2.5 > 10008:: (3.0)

Residual-Delivery Setting

Speed 1/min: 450

Del. quantity cm3/

> 1000s.: 3.00...7.00

Shutoff

electromagnet Volt: 12

Full-load speed regulation

Speed 1/min: 2600

Del. quantity cm3/

> 1000s.: 20.....26.00

Shutoff

electromagnet>Volt: 12

Start:

Speed 1/min: 100

Del. quantity cm3/: 45.00...75.00

mind> 1000s.: 45.00

Shutoff

electromagnet>Volt: 12

Load-dependent start of delivery:

Inj.-qty.dif.measurement:

Speed 1/min: 1250

Inj.—qty. cm3/

difference> 1000s.: -7.40...11.40 *

Shutoff

electromagnet>Volt: 12 TD-travel dif.measurement

1.Speed 1/min: 1250

TD-travel

difference mm: -0.7...0.9 *

Shutoff

electromagnet>Volt: 12.0

Inspection-pump test specifications Test specifications in parentheses

Timing-device characteristic:

2nd speed 1/min:		+		55.60139.00
	: 6.006.80 : (5.807.00)	Ţ	quantity> cm3/10s:	(40.60154.00
KSB/AFB		+	Delivery quant. and	breakaway char.
valve > Volt:	: -	÷		-
Shutoff		+		
electromagnet>Volt:	: 12	+	2nd speed 1/min:	2800
3rd speed 1/min:	1250	+	Shutoff	
TD travel mm:	2.302.70	+	electromagnet Volt:	12
> mm :	(2.003.00)	+	Del. quantity cm3/:	
KSB/AFB		+		(0.005.00)
valve > Volt:	_	ļ	5th speed 1/min:	
Shutoff		+	Shutoff	
electromagnet>Volt:	12	+	electromagnet>Volt:	12
4th speed 1/min:		+	Del. quantity cm3/:	
	0.601.40	+	> 1000s.:	(19.0027.00)
> mm:	(0.401.60)	1	8th speed 1/min:	
KSB/AFB		1	Shutoff	
valve > Volt:	-	1	electromagnet>Volt:	12
Shutoff		1	Del. quantity cm3/:	31.5039.50
electromagnet>Volt:	12	1	> 1000s.:	(30.5040.50)
9th speed 1/min:		1	9th speed 1/min:	
	0.002.20	1	Shutoff	2000
	(0.202.20)	1	electromagnet>Volt:	12
KSB/AFB	(0.000)	1	Del. quantity cm3/:	
valve > Volt:	12.0	1		(38.7043.70)
Shutoff		1	10th speed 1/min:	
electromagnet>Volt:	12 N	1	Shutoff	2000
ctetti dilagnet vott.	,,,,	1	electromagnet>Volt:	12
Supply-pump pressur	e characteristic:	1	Del. quantity cm3/:	
odbbe) banb bi casar	e character isere.	1		(38.0042.60)
1st speed 1/min:	750	I	12th speed 1/min:	
Supply-pump	750	Ι	Shutoff	1230
pressure> bar:	4.405.00	Ι	electromagnet>Volt:	12
> bar:		Ι	Del. quantity cm3/:	
Shutoff Shutoff		Ι	> qualitity this:	(35.139.7)
electromagnet>Voltು	12	Ι	15th speed 1/min:	
2nd speed 1/min:		I	Shutoff	1000
Supply-pump	1230	Ι	electromagnet>Volt:	10
	5.906.50	Ι	Del. quantity cm3/:	
pressure> bar: > bar:		I	> quantity char:	(35.4040.00)
Shutoff	_	T	20th speed 1/min:	
electromagnet>Volt:	12	I	Shutoff	750
3rd speed 1/min:		Ι	electromagnet>Volt:	10
Supply-pump	2000	I	tel. quantity cm3/:	
	7.908.50	T	> quantity clib/:	(34.2038.80)
bar:		I	/ 10003	(34.2030,00)
Shutoff	_	I		
electromagnet>Volt:	10	T		
Stectionagnet/vott.	12	T	Electr. shutoff:	
Ovanlau guantitu at	overflow valves	T	Etectr. Shutoff:	
Overlow quantity at	overitow valve:	T	1st speed 1/min:	705
1st speed 1/min:	750	T	Del. quantity cm3/:	
•	טכז	T		
Shutoff	12	T	> 1000s.: Shutoff	(0.003.00)
electromagnet>Volt:	41.7086.10	T		
		T	electromagnet>volt:	-
quantity> cm3/10s:	2200	T	Domnon out attent	
2nd speed 1/min:	2300	T	Damper set qty.:	
Shutoff electromagnet>Volt:	10	T	LFG-settina:	
	1.6	T-	LEGESCLE (DG):	

	+ gaz d'échappement-ARF)
Idle delivery:	Spacing mm: 12.0
1st speed	1st speed 1/min: 1250 Shutoff
electromagnet Volt: 12	+ electromagnet>Volt: 12
Del. quantity cm3/: 12.016.0	Del. quantity cm3/: 22.5023.50
> 1000s.: (10.018.0)	† > 1000s.: (20.5025.50)
High Idle:	+ Automatic starting fuel delivery:
1st speed 1/mi: 435 Shutoff	1st speed 1/min: 200 Shutoff
electromagnet>Volt: 12	+ electromagnet>Volt: 12
Del. quantity cm3/: 10.014.0 > 1000s.: (8.0016.00)	Del. quantity cm3/: 45.0095.00
	1,0000
Rest delivery:	2nd speed 1/min: 350 Shutoff
1st speed 1/min: 450	+ electromagnet>Volt: 12
Shutoff electromagnet>Volt: 12	Del. quantity cm3/: 15.0045.00 1000s.: (15.0045.00)
Del. quantity cm3/: 3.007.00	10000: (13:00:::43:00)
> 1000s.: (1.009.00)	+ 4th speed 1/min: 100 + Shutoff
Load-dependent start of delivery:	+ electromagnet>Volt: 12
<pre>Injqty.dif.measurement:</pre>	+ Del. quantity cm3/: 45.0075.00
1st speed	> 1000s.: (45 _075.00)
Inj.—aty. cm3/ : -6.18.1 "	+ Shutoff electromagnet:
difference> 1000S.: -	
Shutoff electromagnet>Volt: 12	+ Cut-in + >min voltage : 10.0
2nd speed 1/min: 1250	+ Rated voltage : 12.0
2nd speed	+
difference> 1000s.: - Shutoff	Mounting and assembly dimensions:
electromagnet Volt: 12.0	+ Designation
	+ K mm: 3.63.8
TD-travel dif.measurement:	+ KF mm: 4.74.9
correttore anticipo iniezione (SV): 1st speed	+ MS mm: 0.70.9 + Ya mm: 37.241.2
TD-travel : -1.01.4 '	Yb mm: 61.369.7
difference> mm: -	+
Shutoff	+ Remarks:
electromagnet>Volt: 12	İ :
SP pressdif.measurement:	Ya = Distance between VE flange and
pompa di mandata (FP):	+ speed-control lever in idle
1st speed 1/min: 1250	+ position
Supply pump-	+ Measurement point = edge of control
pressure > : -0.10.3 " difference> bar: -	t lever on drive end
Shutoff	I
electromagnet>Volt: 12	Yb = Distance between Vb flange and
Dank hand dat at 7nd tot of	speed-control lever in rated speed
Part-load del.at 3rd injqty.	position Nessurament point = add of control
terza fermo della portata stop (EGR set)	+ Measurement point = edge of control Lever on distributor—head end
scarico) (ARF)	+ COVER OF GROOT BUILDING
	1

Permissible port/port scatter with stop test, electrical = max. 5.0 ccm/1000 S.

Note inst. in remarks column

Test scheet : REN Edition : 07.08.95

replaces :-

Calibrating oil : ISO-4113

Injection pump : VE4/9F2400R581-1 Type number : 0 460 494 358

Customer Part-No. :

Customer—specific information Customer : RENAULT

Engine : G8T - 752

TEST BENCH REQUIREMENTS

Overflow restricti: 1 463 456 303

Calibrating-oil return>temp. > °C

with>thermometer> : 40.00...48.00 Electronically> : 42.00...50.00

Inlet press., bar : 0.30...0.40

Calibrating nozzle-holder

assembly> : 1 688 901 022

Opening

Pressure> bar: 130.00...133.00

Test inj. tubing : 1 680 750 073

Outside diameter : 6.00 x Wall>thickness : 2.00 x Length> mm: 450

Start of delivery

Prestroke mm:
> (from BDC): -

Injection-pump setting values Test specifications in parentheses

Timing-device travel

Speed 1/min: 1250

Setting value mm: 2.30...2.70

Shutoff

electromagnet>Volt: 12

Supply-pump pressure

Speed 1/min: 1250

Setting value bar: 5.90...6.50

Shutoff

electromagnet>Volt: 12

Full-load del. w/out charge press.:

Speed 1/min: 1250

Del. quantity cm3/

> 1000s.: 36.9...37.9

Shutoff

electromagnet>Volt: 12.0 Dispersion cm3/: 2.5 > 10008:: (3.0)

Residual-Delivery Setting

Speed 1/min: 450

Del. quantity cm3/

> 1000s.: 3.00...7.00

Shutoff

electromagnet Volt: 12

Full-load speed regulation

Speed 1/min: 2600

Del. quantity cm3/

> 1000s.: 20.....26.00

Shutoff

electromagnet>Volt: 12

Start:

Speed 1/min: 100

Del. quantity cm3/: 45.00...75.00

mind> 1000s.: 45.00

Shutoff

electromagnet>Volt: 12

Load-dependent start of delivery:

Inj.-qty.dif.measurement:

Speed 1/min: 1250

Inj.-qty. cm3/

difference> 1000s.: -7.40...11.40 *

Shutoff

electromagnet>Volt: 12 TD-travel dif.measurement

1. Speed 1/min: 1250

TD-travel

difference mm: -0.7...0.9 *

Shutoff

electromagnet>Volt: 12.0

Inspection-pump test specifications Test specifications in parentheses

Timing-device characteristic:

2nd speed 1/min:		+	Overflow :	55.60139.00
TD travel mm:	6.006.80	+	quantity> cm3/10s:	(40.60154.00)
> mm:	(5.807.00)	+		
KSB/AFB		+	Delivery-quant. and	breakaway char.:
valve > Volt:	: -	+	• •	•
Shutoff		+		
electromagnet>Volt:	: 12	1	2nd speed 1/min:	2800
3rd speed 1/min:	1250	1	Shutoff	
	2.302.70	1	electromagnet Volt:	12
	(2.003.00)	1	Del. quantity cm3/:	
KSB/AFB	(2.000.0)	1	> 1000s.:	(0.005.00)
valve > Volt:		\mathbf{I}	5th speed 1/min:	
Shutoff		T	Shutoff	2000
	10	T		12
electromagnet>Volt:		T	electromagnet>Volt:	20.00 24.00
4th speed 1/min:		†	Del. quantity cm3/:	20.0020.00
	0.601.40	†	> 1000s.:	(19.0027.00)
	(0.401.60)	+	8th speed 1/min:	2500
KSB/AFB		+	Shutoff	4.0
valve > Volt:	-	+	electromagnet>Volt:	
Shutoff		+	Del. quantity cm3/:	
electromagnet>Volt:		+		(30.5040.50)
9th speed 1/min:		+	9th speed 1/min:	2300
TD travel mm:	0.002.20	+	Shutoff	
	(0.202.20)	+	electromagnet>Volt:	12
KSB/AFB		+	Del. quantity cm3/:	
valve > Volt:	12.0	1		(38.7043.70)
Shutoff		1	10th speed 1/min:	
electromagnet>Volt:	12.0	1	Shutoff	200.
ctcoti allagilet vocti	12.0	1	electromagnet>Volt:	12
Supply-pump pressur	e characteristic:	1	Del. quantity cm3/:	
adpley built by eason	e that acter 15tic.	T		(38.0042.60)
1st speed 1/mins	750	T		
1st speed 1/min:	750	Ť	12th speed 1/min:	1250
Supply-pump	/ /0 5 00	†	Shutoff	40
•	4.405.00	†	electromagnet>Volt:	
> bar:	-	†	Del. quantity cm3/:	
Shutoff	4-5	+		(35.139.7)
electromagnet>Volt:		+	15th speed 1/min:	1000
2nd speed 1/min:	1250	+	Shutoff	
Supply-pump		+	electromagnet>Volt:	
pressure> bar:	5.906.50	+	Del. quantity cm3/:	36.2039.20
> bar:	-	+	> 1000s.:	(35.4040.00)
Shutoff		+	20th speed 1/min:	750
electromagnet>Volt:	12	+	Shutoff	
3rd speed 1/min:		+	electromagnet>Volt:	12
Supply-pump		1	Del. quantity cm3/:	
	7.908.50	1	> 1000s.:	(34.2038.80)
> bar:		1	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	(3 // 23/ 1/03/ 03/
Shutoff		1		
electromagnet>Volt:	12	1		
etecti dilagnet vott.	12	Ι	Electr. shutoff:	
Overlas assentative et	avantiau valva.	T	etetti. silatoir.	
Overlow quantity at	overstow vatve:	T	1 1/	705
A	750	Ť	1st speed 1/min:	
1st speed 1/min:	750	†	Del. quantity cm3/:	0.003.00
Shutoff	•	†		(0.003.00)
electromagnet>Volt:		†	Shutoff	
	41.7086.10	†	electromagnet>volt:	-
quantity> cm3/10s:		+		
2nd speed 1/min:	2300	+	Damper set qty.:	
Shutoff		+		
electromagnet>Volt:	12	+	LFG-setting:	

Idle delivery:	<pre>+ gaz d'échappement-ARF) + Spacing mm: 12.0</pre>
1st speed 1/min: 385	1st speed
Shutoff	+ Shutoff
electromagnet Volt: 12	+ electromagnet>Volt: 12
Del. quantity cm3/: 12.016.0	+ Del. quantity cm3/: 22.5023.50
> 1000s.: (10.018.0)	> 1000s.: (20.5025.50)
High Idle:	Automatic starting fuel delivery:
1st speed 1/mi: 435 Shutoff	1st speed 1/min: 200 Shutoff
electromagnet>Volt: 12	electromagnet>Volt: 12
Del. quantity cm3/: 10.014.0	Del. quantity cm3/: 45.0095.00
> 1000s.: (8.0016.00)	> 1000s.: (45.0095.00)
Rest delivery:	† 2nd speed 1/min: 350 + Shutoff
1st speed 1/min: 450	electromagnet>Volt: 12
Shutoff	Del. quantity cm3/: 15.0045.00
electromagnet>Volt: 12	1000s.: (15.0045.00)
Del. quantity cm3/: 3.007.00	10000(13.0043.00)
> 1000s.: (1.009.00)	4th speed 1/min: 100 Shutoff
Load-dependent start of delivery:	electromagnet>Volt: 12
Injqty.dif.measurement:	Del. quantity cm3/: 45.0075.00
	> 1000s.: (45 J075.00)
1st speed	
Injqty. cm3/ : -6.18.1 " - difference> 1000s.: -	Shutoff electromagnet:
Shutoff -	├ Cut-in
electromagnet>Volt: 12	
2nd speed 1/min: 1250 -	Rated voltage : 12.0
Injqty. cm3/: 2.08.0 Z'	+
difference> 1000s.: -	Mounting and assembly dimensions:
Shutoff	
electromagnet Volt: 12.0	Designation
-	K mm: 3.63.8
TD-travel dif.measurement:	KF mm: 4.74.9
correttore anticipo iniezione (SV):	MS mm: 0.70.9
1st speed	Ya mm: 37.241.2
TD-travel : -1.01.4 '	Yb mm: 61.369.7
difference> mm:	r - Remarks:
electromagnet>Volt: 12	r Kelliarks:
etecti Gnagnet Pott. 12	
SP pressdif.measurement:	Ya = Distance between VE flange and
pompa di mandata (FP):	speed-control lever in idle
1st speed 1/min: 1250	position
Supply pump-	Measurement point = edge of control
pressure > : -0.10.3 "	lever on drive end
difference> bar: -	-
Shutoff	
electromagnet>Volt: 12	- Yb = Distance between VE flange and
	 speed-control lever in rated speed
Part-load del.at 3rd injqty.	- position
terza fermo della portata	Measurement point = edge of control
stop (EGR set)	lever on distributor head end
scarico) (ARF)	-

Permissible port/port scatter with stop test, electrical = max. 5.0 ccm/1000 S.

BOSCH-INJ.-PUMP TEST SPECIFICATIONS Shutoff Note inst. in remarks column Test scheet : REN : 04.08.95 Edition replaces Speed Calibrating oil : ISO-4113 Injection pump : VE4/9F2250R593 Shutoff Type number : 0 460 494 359 Customer Part-No. : Customer-specific information : RENAULT Customer Engine : G8T-760 CA Shutoff KW: 81 Power TEST BENCH REQUIREMENTS Overflow restricti: 1 463 456 303 Calibrating-oil Speed return>temp. > °C with>thermometer> : 40.00...48.00 Electronically> : 42.00...50.00 Shutoff Inlet press., bar : 0.30...0.40 Calibrating nozzle-holder : 1 688 901 022 assembly> Speed Opening | Pressure> bar: 130.00...133.00 Shutoff Test inj. tubing : 1 680 750 073 Outside diameter : 6.00 x Wall>thickness : 2.00 x Length> mm: 450 Speed Start of delivery Prestroke mm: -Shutoff (from BDC): -Indicator setting Piston stroke> mm: 0,74 Outlet> Speed Injection-pump setting values Test specifications in parentheses > Timing-device travel

Charge press. hPa: 1000 Setting value mm: 2.60...3.00 electromagnet>Volt: 12 Supply-pump pressure 1/min: 1250 Charge press hPa: 1000 Setting value bar: 5.10...5.70 electromagnet>Volt: 12 Full-load del. with charge press.: 1/min: 1250 Charge press. hPa: 1000 Del. quantity cm3/ 1000s.: 58.20...59.20 electromagnet>Volt: 12 Dispersion cm3/: 2.0 1000s.: (3.0) Full-load del. w/out charge press.: 1/min: 500 Del. quantity cm3/ 1000s.: 42.5...43.5 electromagnet>Volt: 12.0 Low-idle speed regulation 1/min: 350 Del. quantity cm3/ 1000s.: 19.5...23.5 electromagnet>Volt: 12.0 Del. quantity cm3/: 2.5 1000s.: (2.5) Residual-Delivery Setting 1/min: 450 Del. quantity cm3/ 1000s.: 5.00...9.00 electromagnet Volt: 12 Full-load speed regulation 1/min: 2450 Charge press hPa: 1000 Del. quantity cm3/ 1000s.: 27.0...33.0 electromagnet>Volt: 12

Start:

Speed

1/min: 1250

Supply-pump pressure characteristic: 1/min: 100 Speed Del. quantity cm3/: 47.50...52.50 1st speed 1/min: 500 1000s.: 47.00 Charge press. hPa: 1000 mind> Shutoff Supply-pump electromagnet>Volt: 12 pressure> bar: 3.30...3.90 bar: -Load-dependent start of delivery: Shutoff Inj.-qty.dif.measurement: electromagnet>Volt: 12 2nd speed 1/min: 1250 1/min: 1250 Charge press. hPa: 1000 Speed Charge press hPa: -Supply-pump bar: 5.10...5.70 Inj.-qty. cm3/pressure> difference> 1000s.: - 9.0...13.0 * bar: -Shutoff Timing valve Volt: electromagnet>Volt: 12.0 Shutoff TD-travel dif.measurement electromagnet>Volt: 12 3rd speed 1/min: 2150 1/min: 1250 1.Speed Charge press. hPa: 1000 Charge press hPa: -Supply-pump TD-travel bar: 6.90...7.50 pressure> mm: -0.6...0.8 *difference> bar: -Shutoff Shutoff electromagnet>Volt: 12.0 electromagnet>Volt: 12 Inspection-pump test specifications Overlow quantity at overflow valve: Test specifications in parentheses 1/min: 500 1st speed Timing-device characteristic: Charge press. hPa: 1000 Shutoff electromagnet>Volt: 12.0 1st speed 1/min: 600 hPa: 1000 Charge press : 50.00...94.40 Overflow mm: 1.50...3.90 quantity> cm3/10s: (35.00...109.4) TD travel mm: -2nd speed 1/min: 2150 KSB/AFB Charge press. hPa: 1000 Shutoff > Volt: 12.0 valve electromagnet>Volt: 12.0 electromagnet>Volt: 12.0 1/min: 1000 : 77.70...161.10 2nd speed Overflow Charge press hPa: 1000 quantity> cm3/10s: (62.70...176.10) mm: 1.50...2.30 TD travel mm: (1.30...2.50) Delivery-quant. and breakaway char.: KSB/AFB valve > Volt: -1/min: 750 Shutoff 1nd speed electromagnet>Volt: 12.0 Charge-air pressure-setting 1/min: 1250 3rd speed point> hPa: 300 hPa: 1000 LDA-stroke mm: 7.3 Charge press TD travel mm: 2.60...3.00 Shutoff mm: (2.30...3.30) electromagnet>Volt: 12.0 Del. quantity cm3/: 49.5...50.5 Timing valve Volt: -Shutoff 1000s.: (47.7...52.3) 1/min: 2600 2nd speed electromagnet>Volt: 12.0 1/min: 2150 Charge press. hPa: 1000 4th speed hPa: 1000 Shutoff Charge press mm: 5.50...6.30 electromagnet Volt: 12.0 TD travel mm: (5.30...6.50) Del. quantity cm3/: 0.00...5.00 Timing valve Volt: -1000s.: (0.00...5.00) Shutoff 3rd speed 1/min: 2550 electromagnet>Volt: 12.0 Charge press. hPa: 1000 Shutoff

electromagnet>Volt:	12.0	t	Shutoff	
Del. quantity cm3/:	6.514.5	+	electromagnet Volt:	12.0
	(5.5015.50)	+	Del. quantity cm3/:	19.523.5
4th speed 1/min:		+	> 1000s.:	(17.525.5)
Charge press. hPa:	1000	+		
Shutoff		+	High Idle:	
electromagnet>Volt:		+		
Del. quantity cm3/:		+	1st speed 1/mi:	400
> 1000s.:	(26.034.0)	t	Shutoff	
5th speed 1/min:		+	electromagnet>Volt:	
Charge press. hPa:	1000	+	Del. quantity cm3/:	
Shutoff		+	> 1000s.:	(15.523.5)
electromagnet>Volt:		+		
Del. quantity cm3/:		+	Rest delivery:	
> 1000s.:	(54.4059.00)	+		
6th speed 1/min:		+	1st speed 1/min:	450
Charge press. hPa:	1000	+	Shutoff	
Shutoff		+	electromagnet>Volt:	12.0
electromagnet>Volt:		+	Del. quantity cm3/:	
Del. quantity cm3/:	58.259.2	+	> 1000s.:	-
> 1000s.:	(56.461.0)	+		
7th speed 1/min:	1000	+	Load-dependent star	t of delivery:
Charge press. hPa:	1000	+	Injqty.dif.measur	
Shutoff		+		
electromagnet>Volt:	12.0	+	1st speed 1/min:	1250
Del. quantity cm3/:	58.161.1	+	Charge press. hPa:	
	(57.361.9)	+	Injqty. cm3/ :	
8th speed 1/min:		1	difference> 1000s.:	
Charge press. hPa:		1	Shutoff	
Shutoff		1	electromagnet>Volt:	12.0
electromagnet>Volt:	12.0	1	2nd speed 1/min:	1250
Del. quantity cm3/:	55.7058.70	1	Charge press. hPa:	
> 1000s.:	(54.9059.50)	1	Injqty. cm3/:	2.08.0 /1
9th speed 1/min:		1	difference> 1000S.:	-
Charge press. hPa:		1	3rd speed 1/min:	
Shutoff		1	Charge press. hPa:	
electromagnet>Volt:	12.0	1	Inj.—qty. cm3/:	
Del. quantity cm3/:	42.5043.50	1	difference> 1000S.:	
> 10005.:	(40.7045.30)	1	KSB/AFB	
7000011	(4011011175100)	1	valve > Volt:	12 N
		1	Shutoff	14.0
		1	electromagnet>Volt:	12 0
Electr. shutoff:		1	ceceromagnes voce.	12.0
Eccoti. Shatori.		1	TD-travel dif.measu	rement.
1st speed 1/min:	350	1	correttore anticipo	
Charge press. hPa:		1	1st speed 1/min:	1250
Del. quantity cm3/:	0.003.00	1	Charge press. hPa:	
> 1000s.:	(0.003.00)	1		-0.30.9 '
Shutoff	(0.000.00)	1	difference> mm:	
electromagnet>volt:		1	Shutoff	
Timing valve Volt:		1	electromagnet>Volt:	12 0
Timing valve vote.		1	2nd speed 1/min:	
Damper set qty.:		1	Charge press. hPa:	
bumper see quy		1	TD-travel :	0.00.6 **
LFG-setting:		1	difference> mm:	
LIG SECETING.		Ĺ	KSB/AFB	
Idle delivery:		1	valve > Volt:	12 0
Tate decivery.		1	Shutoff	12.0
1st speed 1/min:	350	1	electromagnet>Volt:	12 0
Timing valve Volt:		1	croci omagnet vott.	16.0
THINING VOLUE		ī		

SP press.-dif.measurement: pompa di mandata (FP): 1st speed 1/min: 1250 Charge press. hPa: -Supply pump-: - 0.1...0.3 " pressure > difference> bar: -Shutoff electromagnet>Volt: 12.0 Automatic starting fuel delivery: 1st speed 1/min: 200 Shutoff electromagnet>Volt: 12.0 Del. quantity cm3/: 50.00...70.00 1000s.: -1/min: 300 2nd speed Shutoff electromagnet>Volt: 12.0 Del. quantity cm3/: 30.00...50.00 1000s.: -1/min: 100 4th speed Shutoff electromagnet>Volt: 12.0 Del. quantity cm3/: 47.50...52.50 1000s.: -Shutoff electromagnet: Cut-in >min voltage : 10.0 Rated voltage : 12.0 Mounting and assembly dimensions: Designation mm: 3.6...3.8 K KF mm: 6.00 mm: 0.7...1.1 MS LDA stroke mm: 7.3 mm: 37.2...41.2 Ya mm: 61.3...69.7 Yb Remarks: : Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end Yb = Distance between VE flange and speed-control lever in rated speed Measurement point = edge of control lever on distributor-head end

Permissible port/port scatter with stop test, electrical = max. 5.0 ccm/1000 S.

Permissible port/port scatter with stop test, mechanical = max. 5.0 ccm/1000 S.

BOSCH-INJ.-PUMP TEST SPECIFICATIONS Note inst. in remarks column Test scheet : REN Edition : 04.08.95 replaces Calibrating oil : ISO-4113 Injection pump : VE4/9F2250R593-1 : 0 460 494 360 Type number Customer Part-No. : Customer-specific information Customer : RENAULT : G8T-760 CA Engine KW: 81 Power TEST BENCH REQUIREMENTS Overflow restricti: 1 463 456 303 Calibrating oil return>temp. > °C with>thermometer> : 40.00...48.00 Electronically> : 42.00...50.00 Inlet press., bar: 0.30...0.40 Calibrating nozzle-holder : 1 688 901 022 assembly> Opening | bar: 130.00...133.00 Pressure> Test inj. tubing : 1 680 750 073 Outside diameter : 6.00 x Wall>thickness : 2.00 x Length> mm: 450 Start of delivery mm: -Prestroke (from BDC): -Indicator setting Piston stroke> mm: 0,74 Outlet>

Charge press. hPa: 1000 Setting value mm: 2.60...3.00 Shutoff electromagnet>Volt: 12 Supply-pump pressure Speed 1/min: 1250 Charge press hPa: 1000 Setting value bar: 5.10...5.70 Shutoff electromagnet>Volt: 12 Full-load del. with charge press.: 1/min: 1250 Charge press. hPa: 1000 Del. quantity cm3/ 1000s.: 58.20...59.20 Shutoff electromagnet>Volt: 12 cm3/: 2.0 Dispersion 1000s.: (3.0) Full-load del. w/out charge press.: 1/min: 500 Speed Del. quantity cm3/ 1000s.: 42.5...43.5 Shutoff electromagnet>Volt: 12.0 Low-idle speed regulation 1/min: 350 Del. quantity cm3/ 1000s.: 19.5...23.5 Shutoff electromagnet>Volt: 12.0 Del. quantity cm3/: 2.5 1000s.: (2.5) Residual-Delivery Setting 1/min: 450 Speed Del. quantity cm3/ 1000s.: 5.00...9.00 Shutoff electromagnet Volt: 12 Full-load speed regulation 1/min: 2450 Speed Charge press hPa: 1000 Del. quantity cm3/ 1000s.: 27.0...33.0 Shutoff electromagnet>Volt: 12

Start:

N18

Speed

Injection-pump setting values Test specifications in parentheses

1/min: 1250

Timing-device travel

Supply-pump pressure characteristic: 1/min: 100 Speed Del. quantity cm3/: 47.50...52.50 1st speed 1/min: 500 1000s.: 47.00 Charge press. hPa: 1000 mind> Shutoff Supply-pump electromagnet>Volt: 12 pressure> bar: 3.30...3.90 > bar: -Load-dependent start of delivery: Shutoff Inj.-qty.dif.measurement: electromagnet>Volt: 12 2nd speed 1/min: 1250 Speed 1/min: 1250 Charge press. hPa: 1000 Charge press hPa: -Supply-pump Inj.-qty. cm3/ bar: 5.10...5.70 pressure> difference> 1000s.: - 9.0...13.0 * bar: -Shutoff Timing valve Volt: electromagnet>Voit: 12.0 Shutoff TD-travel dif.measurement electromagnet>Volt: 12 1/min: 2150 3rd speed 1/min: 1250 1.Speed Charge press. hPa: 1000 Charge press hPa: -Supply-pump TD-travel bar: 6.90...7.50 pressure> difference> mm: -0.6...0.8 *> bar: -Shutoff Shutoff electromagnet>Volt: 12.0 electromagnet>Volt: 12 Inspection pump test specifications Overlow quantity at overflow valve: Test specifications in parentheses 1st speed 1/min: 500 Timing-device characteristic: Charge press. hPa: 1000 Shutoff 1/min: 600 electromagnet>Volt: 12.0 1st speed Charge press hPa: 1000 Overflow : 50.00...94.40 mm: 1.50...3.90 quantity> cm3/10s: (35.00...109.4) TD travel 1/min: 2150 > mm: -2nd speed KSB/AFB Charge press. hPa: 1000 > Volt: 12.0 Shutoff valve electromagnet>Volt: 12.0 electromagnet>Volt: 12.0 1/min: 1000 : 77.70...161.10 2nd speed Overflow Charge press hPa: 1000 quantity> cm3/10s: (62.70...176.10) mm: 1.50...2.30 TD travel > mm: (1.30...2.50) Delivery-quant. and breakaway char.: KSB/AFB Volt: valve Shutoff 1nd speed 1/min: 750 electromagnet>Volt: 12.0 Charge-air pressure-setting 3rd speed 1/min: 1250 point> hPa: 300 Charge press hPa: 1000 LDA-stroke mm: 7.3 TD travel mm: 2.60...3.00 Shutoff mm: (2.30...3.30) electromagnet>Volt: 12.0 Del. quantity cm3/: 49.5...50.5 Timing valve Volt: -1000s.: (47.7...52.3) 1/min: 2600 Shutoff electromagnet>Volt: 12.0 2nd speed 1/min: 2150 Charge press. hPa: 1000 4th speed hPa: 1000 Charge press Shutoff mm: 5.50...6.30 TD travel electromagnet Volt: 12.0 Del. quantity cm3/: 0.00...5.00 mm: (5.30...6.50) 1000s.: (0.00...5.00) Timing valve Volt: -1/min: 2550 Shutoff 3rd speed Charge press. hPa: 1000 electromagnet>Volt: 12.0 Shutoff

4th speed 1/min: Charge press. hPa:	6.514.5 (5.5015.50) 2450	† † † †	Shutoff electromagnet Volt: Del. quantity cm3/: > 1000s.:	
Shutoff electromagnet>Volt:		‡	High Idle:	
	(26.034.0)	‡	1st speed 1/mi: Shutoff	
5th speed 1/min: Charge press. hPa: Shutoff	1000	‡	<pre>electromagnet>Volt: Del. quantity cm3/: > 1000s.:</pre>	
<pre>electromagnet>Volt: Del. quantity cm3/: > 1000S.;</pre>	55.7058.70 (54.4059.00)	Ī	Rest delivery:	
6th speed 1/min: Charge press. hPa:		†	1st speed 1/min: Shutoff	
	58.259.2 (56.461.0)	++	<pre>electromagnet>Volt: Del. quantity cm3/: > 1000S.:</pre>	5.09.0
7th speed 1/min: Charge press. hPa: Shutoff		‡	Load-dependent star Injqty.dif.measur	
8th speed 1/min:	58.161.1 (57.361.9) 500	† † †	1st speed 1/min: Charge press. hPa: Injqty. cm3/: difference> 1000S.:	- - 7.59.5 "
Charge press. hPa: Shutoff electromagnet>Volt:	12.0	Ī	Shutoff electromagnet>Volt: 2nd speed 1/min:	
Del. quantity cm3/: > 1000s.: 9th speed 1/min: Charge press. hPa: Shutoff	(54.9059.50) 500	+	Charge press. hPa: Inj.—qty. cm3/: difference> 1000S.: 3rd speed 1/min: Charge press. hPa:	2.08.0 ∠' - 1250
<pre>electromagnet>Volt: Del. quantity cm3/:</pre>	12.0 42.5043.50 (40.7045.30)	‡	Inj.—qty. cm3/: difference> 1000s.: KSB/AFB	2.08.0 Z**
		+	<pre>valve > Volt: Shutoff electromagnet>Volt:</pre>	
Electr. shutoff:		+	TD-travel dif.measu	
1st speed 1/min: Charge press. hPa: Del. quantity cm3/: > 1000s.:		+	correttore anticipo 1st speed 1/min: Charge press. hPa:	iniezione (SV): 1250
Shutoff electromagnet>volt: Timing valve Volt:		+	<pre>difference> mm: Shutoff electromagnet>Volt:</pre>	- 12.0
Damper set qty.:		+	2nd speed 1/min: Charge press. hPa:	ALFB
LFG-setting:		+	TD-travel : difference> mm: KSB/AFB	0.00.6 **
Idle delivery:		+	valve > Volt: Shutoff	12.0
1st speed 1/min: Timing valve Volt:			electromagnet>Volt:	12.0

SP press.-dif.measurement: pompa di mandata (FP): 1st speed 1/min: 1250 Charge press. hPa: -Supply pumppressure > : - 0.1...0.3 " difference> bar: -Shutoff electromagnet>Volt: 12.0 Automatic starting fuel delivery: 1/min: 200 1st speed Shutoff electromagnet>Volt: 12.0 Del. quantity cm3/: 50.00...70.00 1000s .: -2nd speed 1/min: 300 Shutoff electromagnet>Volt: 12.0 Del. quantity cm3/: 30.00...50.00 1000s.: -4th speed 1/min: 100 Shutoff electromagnet>Volt: 12.0 Del. quantity cm3/: 47.50...52.50 1000s.: -Shutoff electromagnet: Cut-in >min voltage : 10.0 Rated voltage : 12.0 Mounting and assembly dimensions: Designation mm: 3.6...3.8 K KF mm: 6.00 mm: 0.7...1.1 MS mm: 7.3 LDA stroke mm: 37.2...41.2 Ya mm: 61.3...69.7 Yb Remarks: Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control Lever on drive end

Yb = Distance between VE flange and speed-control lever in rated speed

Measurement point = edge of control

lever on distributor-head end

Permissible port/port scatter with stop test, electrical = max. 5.0 ccm/1000 S.

Permissible port/port scatter with stop test, mechanical = max. 5.0 ccm/1000 S.

BOSCH-INJ.-PUMP TEST SPECIFICATIONS Note inst. in remarks column Test scheet : VW Edition : 07.08.95 replaces Calibrating oil : ISO-4113 : VE4/9F2300R594 Injection pump Type number : 0 460 494 365 Customer Part-No. : Customer-specific information Customer : 1,9 L UD B4 Engine TEST BENCH REQUIREMENTS Overflow restricti: 1 463 456 303 Calibrating-oil return>temp. > °C with>thermometer>: 40.00...48.00 Electronically> : 42.00...50.00 Inlet press., bar: 0.30...0.40 Calibrating nozzle-holder assembly> : 1 688 901 000 Opening bar: 147.00...150.00 Pressure> Test inj. tubing : 1 680 750 017 Outside diameter : 6.00 x Wall>thickness : 2.00 x Length> mm: 840 Start of delivery Prestroke (from BDC): -Indicator setting Piston stroke> mm: 0.8 Outlet> Injection-pump setting values Test specifications in parentheses Timing-device travel

1/min: 1250

Setting value mm: 4.30...4.50

Charge press. hPa: 750

Shutoff electromagnet>Volt: 12 Supply-pump pressure Speed 1/min: 1250 Charge press hPa: 750 Setting value bar: 5.40...6.00 Shutoff electromagnet>Volt: 12 Full-load del. with charge press.: Speed 1/min: 1250 Charge press. hPa: 750 Del. quantity cm3/ 1000s.: 50.00...51.00 > Shutoff electromagnet>Volt: 12 cm3/: 2.5Dispersion 1000s.: (3.0) Full-load del. w/out charge press.: 1/min: 450 Speed Del. quantity cm3/ 1000s.: 37.2...43.2 Shutoff electromagnet>Volt: 12.0 Residual-Delivery Setting 1/min: 550 Speed Del. quantity cm3/ 1000s.: 7.00...8.00 Shutoff electromagnet Volt: 12 Full-load speed regulation 1/min: 2600 Speed Charge press hPa: 750 Del. quantity cm3/ 1000s.: 9.00...13.00 Shutoff electromagnet>Volt: 12 Start: Speed 1/min: 100 Del. quantity cm3/: 32.5...47.5 mind> 1000s.: 32.5 Shutoff electromagnet>Volt: 12.0 Load-dependent start of delivery: Inj.-qty.dif.measurement: Speed 1/min: 1250

Inj.-qty.

cm3/

Speed

difference> 1000s.: -7.011.0 *	+
Shutoff	1st speed 1/min: 1250
electromagnet>Volt: 12	+ Charge press. hPa: 750
TD-travel dif.measurement	+ Shutoff
	+ electromagnet>Volt: 12
1.Speed 1/min: 1250	+ Overflow : 41.7086.10
TD-travel	+ quantity> cm3/10s: (26.70101.10
difference> mm: -1.92.1 *	+ 2nd speed 1/min: 2100
Shutoff	+ Charge press. hPa: 750
electromagnet>Volt: 12	Shutoff
Inchestion was test chesifications	+ electromagnet>Volt: 12 + Overflow : 55.60152.90
Inspection-pump test specifications Test specifications in parentheses	quantity> cm3/10s: (40.60167.90
rest specifications in parentheses	T qualitity (115) 105. (40.00107.70
Timing-device characteristic:	Delivery-quant. and breakaway char.
Thinning active originates to the	becivery quarte: and breakaway char.
2nd speed 1/min: 2100	1
Charge press hPa: 750	2nd speed 1/min: 2750
TD travel mm: 8.008.60	+ Charge press. hPa: 750
> mm: (7.509.10)	Shutoff
Shutoff	+ electromagnet Volt: 12
electromagnet>Volt: 12	+ Del. quantity cm3/: 0.003.00
3rd speed 1/min: 1250	+ > 1000s.: (0.003.00)
Charge press hPa: 750	+ 5th speed 1/min: 2600
TD travel mm: 4.304.50	+ Charge press. hPa: 750
> mm: (3.605.20)	+ Shutoff
Shutoff	+ electromagnet>Volt: 12
electromagnet>Volt: 12	Del. quantity cm3/: 9.G13.00
4th speed 1/min: 750	+ > 1000s.: (7.0015.00)
Charge press hPa: 750	+ 8th speed 1/min: 2400
The travel and 150 2.10	
TD travel mm: 1.502.10 > mm: (1.002.60)	+ Charge press. hPa: 750
	+ Shutoff
Shutoff 12	+ electromagnet>Volt: 12
electromagnet>Volt: 12	+ Del. quantity cm3/: 32.5042.50 + > 1000s.: (31.5043.50)
Sumply me processes characteristics	+ > 1000s.: (31.5043.50) + 9th speed 1/min: 2100
Supply-pump pressure characteristic:	
1-t 1/min 250	+ Charge press. hPa: 750
1st speed	+ Shutoff
Charge press. hPa: 750	+ electromagnet>Volt: 12
Supply-pump	Del. quantity cm3/: 42.0044.00 1000s.: (40.8045.20)
pressure> bar: 4.304.90	+ > 1000S.: (40.8045.20)
> bar: -	+ 12th speed 1/min: 1250
Shutoff	+ Charge press. hPa: 750
electromagnet>Volt: 12	+ Shutoff
2nd speed	+ electromagnet>Volt: 12
Charge press. hPa: 750	+ Del. quantity cm3/: 50.0051.00
Supply-pump	+ > 1000s.: (48.352.7)
pressure> bar: 5.406.00	+ 21th speed 1/min: 450
> bar: -	+ Charge press. hPa: -
Shutoff	+ Shutoff
electromagnet>Volt: 12	+ electromagnet>Volt: 12
3rd speed 1/min: 2100	+ Del. quantity cm3/: 37.2043.20
Charge press. hPa: 750	+ > 1000s.: (34.7045.70)
Supply-pump	+
pressure> bar: 7.408.00	+
> bar: -	+
Shutoff	+ Electr. shutoff:
electromagnet>Volt: 12	+
	† 1st speed 1/min: 450
Overlow quantity at overflow valve:	+ Del. quantity cm3/: 0.003.00

> Shutoff		(0.003.00)	‡	Charge press. hPa: - TD-travel : -2.52.9
electromagne Idle deliver		_	Ŧ	<pre>difference> mm: - Shutoff electromagnet>Volt: 12</pre>
Tute detiver	у.		Ī	SP press.—dif.measurement:
Damper set o	ity.:		Ŧ	pompa di mandata (FP): 1st speed 1/min: 1250
1st speed Shutoff	1/min:	1000	+	Charge press. hPa: - Supply pump-
electromagne	t>Volt:	12.0	+	
Del. quantit	y cm3/:	17.019.0	+	pressure > : -0.10.3 " difference> bar: -
>		(14.022.0)	+	Shutoff
			+	electromagnet>Volt: 12
LFG-setting:			<u>†</u>	Part-load del.at 3rd injqty.
Idle deliver	v:		1	terza fermo della portata
	, .		1	stop (EGR set)
1st speed	1/min:	450	1	scarico) (ARF)
Shutoff	.,		1	gaz d'échappement-ARF)
electromagne	+ Volt:	12	1	Spacing mm: 12.0
Del quantit	v cm3/*	16.0018.00	1	opdering imit. 12:0
		(13.0021.00)	1	1st speed 1/min: 1000
	10000	(13.0027.00)	Ι	Charge press. hPa: 750
High Idle:			\mathbf{I}	Shutoff
mgir tace.			Ι	electromagnet>Volt: 12
1st speed	1/mi:	500	\mathbf{I}	Del. quantity cm3/: 34. J36.00
Shutoff	:///:.	500	Ι	> 1000s.: (32.0038.00
electromagne	+>1/0/+	12	I	/ 10003 (32.0036.00
Del mushtit	v cm3/.	16.0018.00	${ m I}$	Automatic starting fuel delivery:
>	1000s.:	(13.0021.00)	Ŧ	-
معددة علما كالمص			†	1st speed 1/min: 180
Rest deliver	λ:		T	Shutoff electromagnet>Volt: 12
1st speed	1/min.	550	Ι	Del. quantity cm3/: 35.0055.00
Shutoff	1740111	330	Ι	> 1000s.: (35.0055.00
electromagne	+>1/0/+•	10	T	/ 10003.: (33.0033.00.
Del. quantit			Ι	2nd speed 1/min: 380
		(5.509.50)	I	• • • • • • • • • • • • • • • • • • •
>	10005.:	(3.309.30)	T	Shutoff
		of doldvome	T	electromagnet>Volt: 12
		of delivery:	T	Del. quantity cm3/: 31.0051.00 > 1000s.: (31.0051.00)
Inj.—qty.dif	.measure	meric:	T	> 10003.: (31.0031.00.
1st speed	1/min.	1250	Ι	3rd speed 1/min: 100
Charge press			Ι	Shutoff
rnarge press	. !!ra. 2/ .	-4.56.5 "	Ι	
difference>			T	electromagnet>Volt: 12
	10005.:	-	T	Del. quantity cm3/: 37.0043.00
Shutoff		13	Ť	> 1000s.: (32.5047.50)
electromagne			T	Chimage all and a second
	1/min:		T	Shutoff electromagnet:
charge press			T	Cont. Su.
		0.03.0 Z'	T	Cut-in
difference>	10002.:	-	T	>min voltage : 10.0
Shutoff	L 14-14	12.0	1	Rated voltage : 12.0
electromagne	t volt:	12.0	T	Maymaking and assaults strong to
PA A	e		T	Mounting and assembly dimensions:
D-travel di			T	Dociematica
		iniezione (SV):	†	Designation 7.0
st speed	1/m1n: 1	1/711 -	+	K mm: 3.63.8

KF mm: KOT mm: 1.0...1.4 mm: MIKROSCH. XL mm: A=0.8...3.0 Ya mm: 37.6...41.6 Yb mm: 49.9...62.8

Remarks:

Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end

Yb = Distance between VE flange and speed-control lever in rated speed position Measurement point = edge of control lever on distributor-head end